

REPORT NUMBER 130

OCTOBER 1963

# STRUCTURAL ANALYSIS, WING BASIC COMPONENTS

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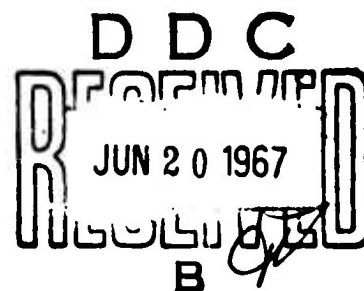
STRUCTURAL ANALYSIS  
WING BASIC COMPONENTS

U.S. ARMY XV-5A LIFT FAN  
FLIGHT RESEARCH AIRCRAFT PROGRAM

CONTRACT NUMBER DA44-177-TC-715

*Report 130*

OCTOBER 1963



ADVANCED ENGINE AND TECHNOLOGY DEPARTMENT  
GENERAL ELECTRIC COMPANY  
CINCINNATI, OHIO

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## INTRODUCTION

The structural analysis of the basic wing components of the U.S. Army XV-5A Lift Fan Research Aircraft is presented in this report. The basic structural components of the wing are composed of the two spars, the wing leading edge torque box, and the skins and ribs of the panel outboard of the lift fan. A complete digital computer program applicable to this and other highly redundant structures was developed at Ryan by R. W. Andres. Since this program was used in the structural analysis and design, the deflections, internal loads, and internal stresses for critical flight conditions are summarized here in the form of printed computer output.

Structural analyses of the flap, aileron, lift fan fittings, spar joints, and leading and trailing edge details are presented in a separate report.

## II. SUMMARY AND METHOD OF APPROACH

The basic wing structure consists of a conventional torque box outboard of the lift fan, and two machined 7079 aluminum alloy spars, which bolt to carry-through structure at the fuselage and run full span. Wing bending is carried by the two spars, and the torque outboard is carried by the torque box. The torque inboard, however, must be carried primarily by the spars acting in differential bending, because of the large structural cut-out for the fan installation. The only closed cell in this area to be considered for conventional flight loads is the leading edge box forward of the front spar. Figures 1 and 2 are reproductions of the Wing Installation Drawing.

The structure was first idealized geometrically into one symmetrical with respect to the wing reference plane. In further idealization the basic structure was broken down into bars and shear panels, defined by coordinates relative to the airplane axes. General idealized bar forces are shown in Figure 3; general idealized panel shear flows are shown in Figure 4.

The matrix method of Wehle and Lansing (Ref. 1) was programmed for the IBM 704 Computer, the solution yielding complete sets of deflection coefficients as well as internal loads and stresses and external deflections of the redundant structure for both symmetrical and unsymmetrical flight conditions. The program was written as a function of unit panel point loads identified and located according to Figures 5(a) and 5(b). The actual limit values of these panel point loads for the various critical flight conditions were found by use of a separate loads program which was based on the v-n diagram and other requirements of the Structural Design Criteria (Ref. 2). The development of this program will be given in a separate loads report; however, a summary of the critical symmetrical and unsymmetrical flight panel point loads is included in this report.

Seventy equations of statics based on the geometry of Figures 6 and 7, were written to relate internal bar loads, shear flows, and external panel point loads. These equations are identical for both symmetrical and anti-symmetrical flight conditions with the exception of Equations Nos. 42 and 43. Development of the static equations may be found on pages 11 through 32. Since there were 78 internal forces and 70 equations of statics, there were 8 redundants, chosen as the following:  $q_{19}$ ,  $q_{20}$ ,  $q_{21}$ ,  $q_{22}$ ,  $q_{23}$ ,  $q_{24}$ ,  $q_{26}$ , and  $q_{28}$ . The static equations were written with these 8 redundants appearing on the right hand side together with the 27 applied panel point loads. A 704 computer program was used then to obtain for the "cut" structure an

3

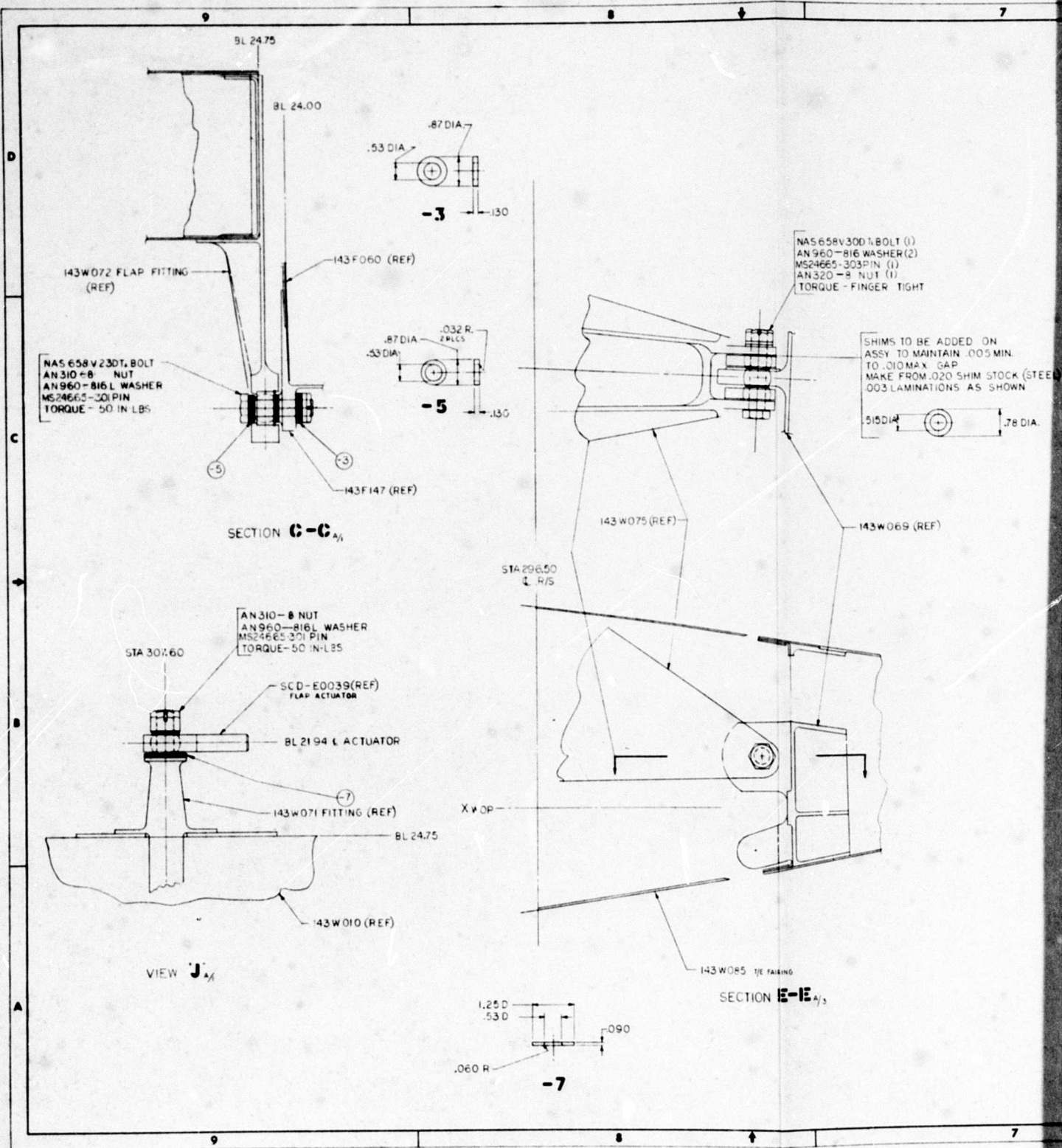
equation for each of the 78 internal forces as a function of unit redundant forces and unit external forces. This is the matrix QIRQIM. Two of these were found: one for symmetrical wing loading and one for anti-symmetrical wing loading.

Another major input to the program was the flexibility matrix  $A_{ij}$ , which is the expression of displacement of each of the 78 internal members as a function of unit loads acting on the member. During the structural design phase of the wing, several flexibility combinations were tried and the resulting internal stresses for preliminary loads evaluated in an attempt to optimize the structure from a strength-weight standpoint. Deflections for these flexibility combinations were also studied in order to achieve what was considered favorable relative rigidity between spars, that which produced minimum twist. The modulus used in calculating flexibility was that for 250°F, since temperature in the basic structure is not to exceed this value.

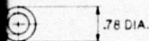
A summary of analysis for symmetrical flight conditions begins on page 33. Included in this summary are the results of sixteen conditions, which represent 4 points on the v-n curve, each for two extreme c.g. positions and with and without pitching acceleration. Of these, the positive low angle of attack condition, forward c.g., zero pitching acceleration, point B (Cond. "PLAFO") produced the highest cap loads in both front and rear spars at the fuselage. This condition, therefore, was chosen as the critical one for static proof test.

As noted, the program was written to be applicable for either symmetrical or anti-symmetrical flight conditions. Unsymmetrical flight loads may be obtained by adding those due to symmetrical contributions and those due to anti-symmetrical contributions. The program was varied then so that the added effect of these could be done on the computer. The resulting internal loads, stresses, and external deflections shown in this report are those for rolling pull-out maneuvers, the summary beginning on page 204. There were 20 combinations of loads due to normal load factor and aileron-induced effects. Load factors of 3.0, 2.5, 2.0, and 1.0 were considered in combination with aileron deflection of +15.00, -19.00, +7.05, -8.94, and 0. It was found that the  $N_z = 3.0$  and aileron deflection = 15° combination produced slightly excessive loading at the rear spar-fuselage connection. For this reason, the criteria was lowered, so that a normal load factor of 2.5 is not to be exceeded during rolling pull-out.

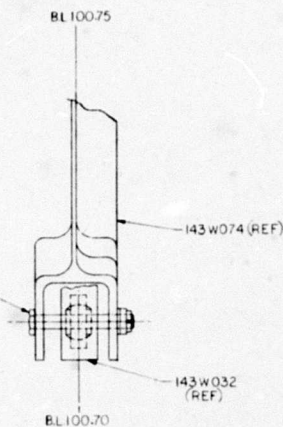
Other symmetrical and asymmetrical flight conditions were investigated, including those for flaps down, but they were found by comparison to be not critical and are not included in this report.



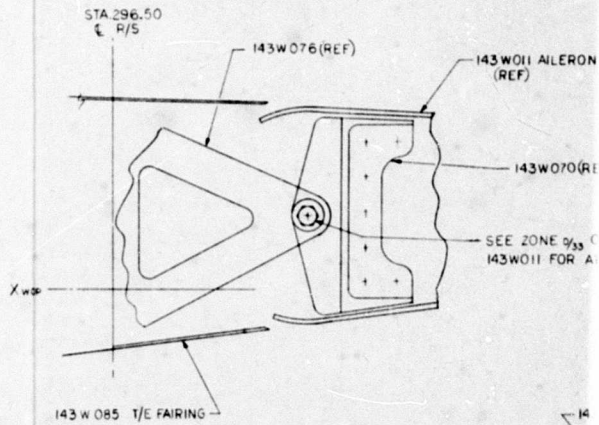
ADDED ON  
 MAINTAIN .003 MIN.  
 GAP  
 .020 SHIM STOCK (STEEL)  
 TIONS AS SHOWN



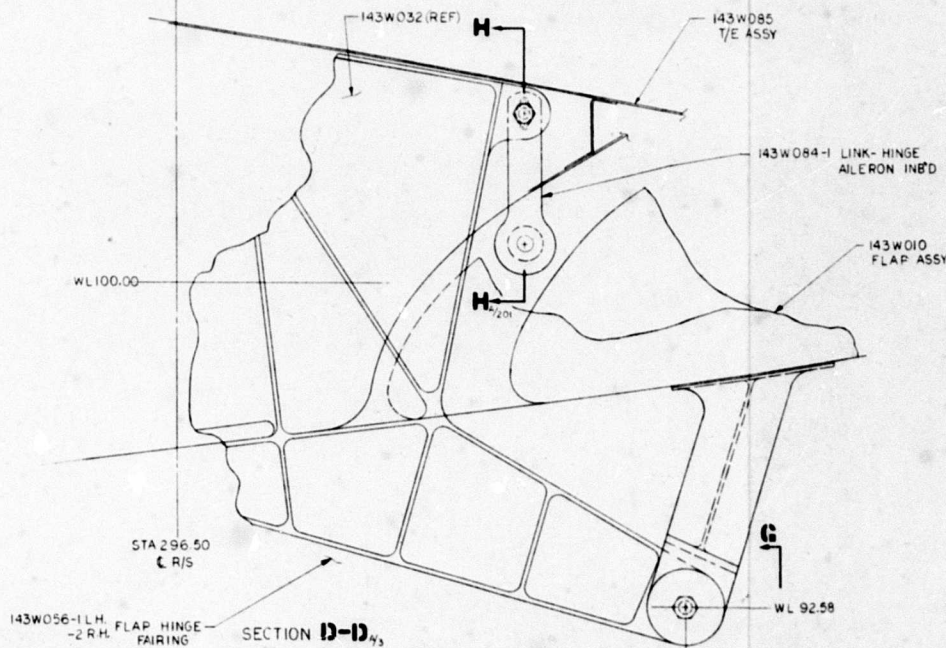
NAS 655 V30D T. BOLT  
 AN 960 - 1/16 WASHER  
 AN 310 - 5 NUT  
 MS24665-153 PIN  
 TORQUE - FINGER TIGHT



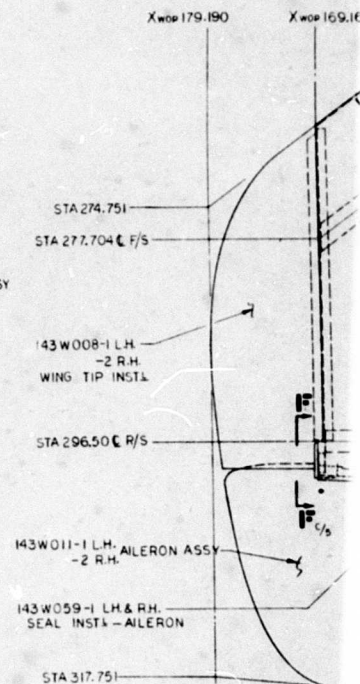
SECTION G-G<sub>A/S</sub>



SECTION F-F<sub>A/S</sub>

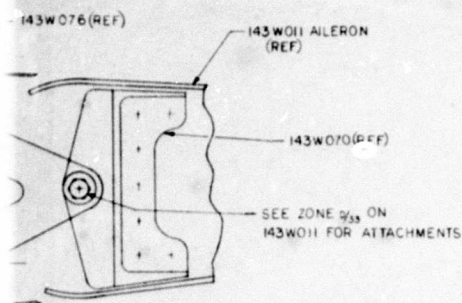


SECTION D-D<sub>A/S</sub>

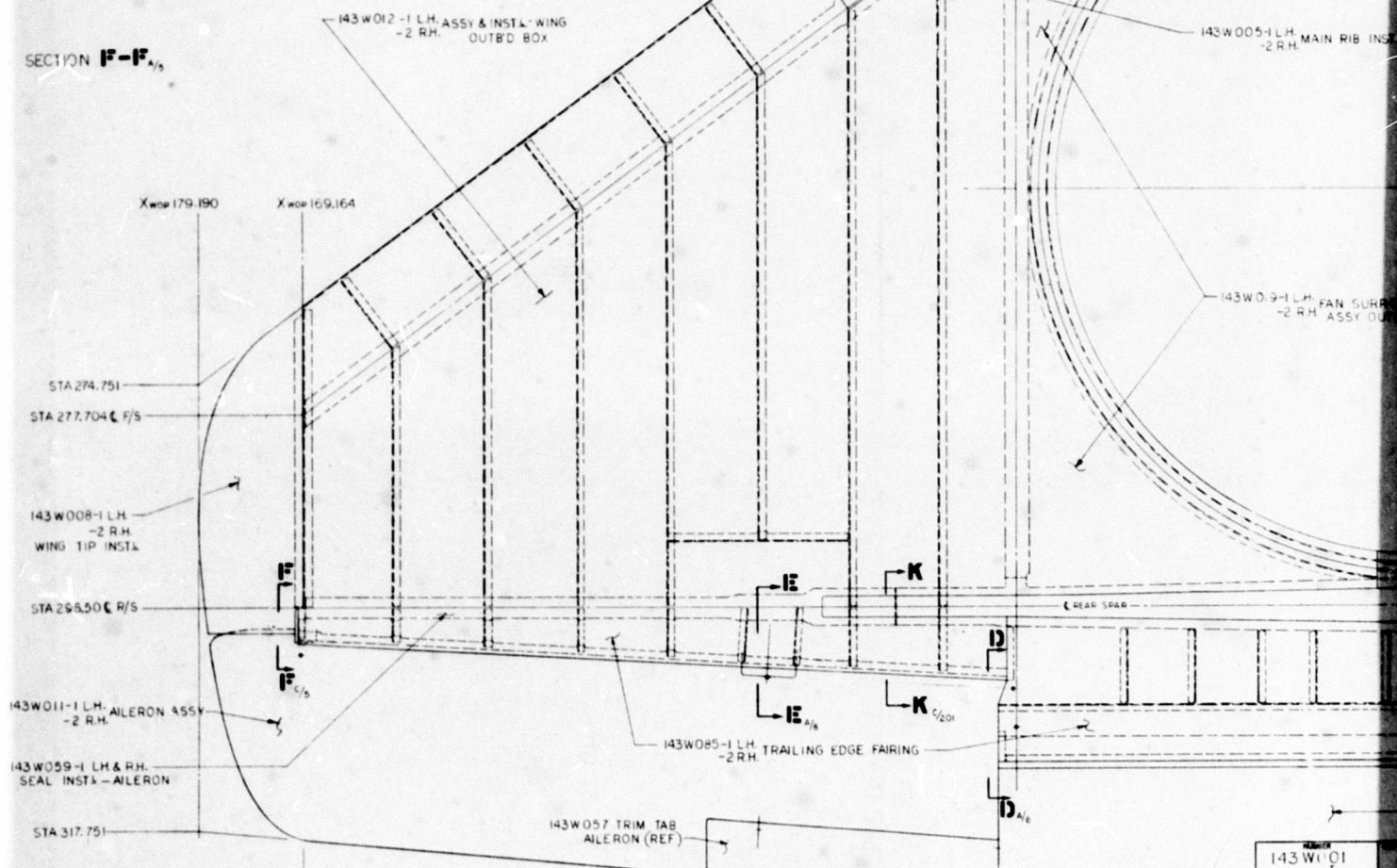


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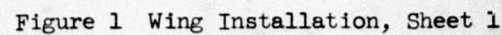




SECTION F-F<sub>1/5</sub>

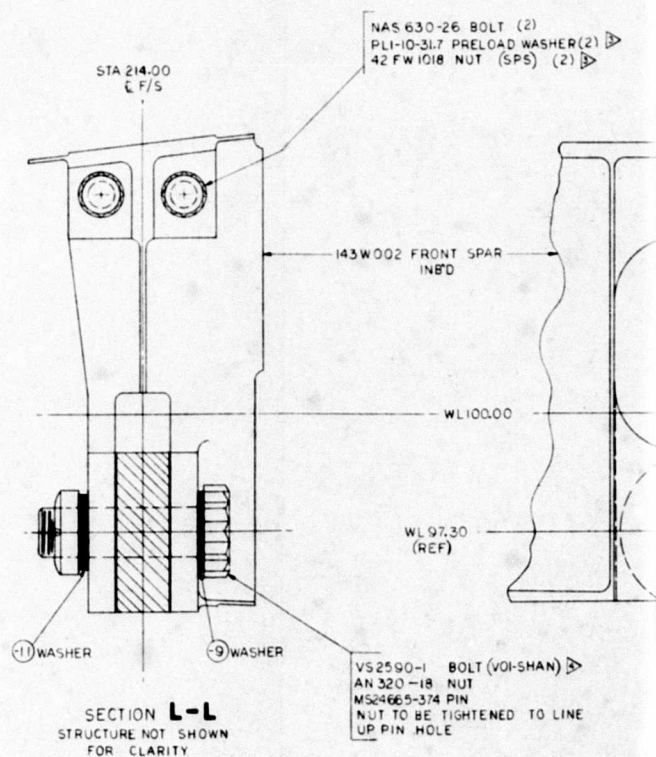


C









NAS 630-26 BOLT (2)  
PLI-10-31.7 PRELOAD WASHER (2)  $\triangleright$   
42 FW 1018 NUT (SPS) (2)  $\triangleright$

BL 24.00  
BL 24.10 (REF)

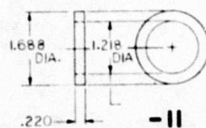
W002 FRONT SPAR  
INB'D

WL 100.00

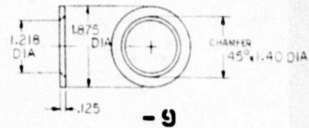
WL 97.30  
(REF)

BL 26.175 (REF)

SECTION A-A  $\frac{1}{2}$



-11



-9

STA 296.50  
C R/S

NAS 630-20 BOLT (2)  
PLHD-31.7 PRELOAD  
42 FW 1018 NUT (SPS)

W003 REAR  
INB'D

WL 100.00

VS 2590-1 BOLT  
AN 320-18 NUT  
MS24665-374 PIN  
NUT TO BE TIGHTENED  
UP PIN HOLE

SECTION M-M  
STRUCTURE NOT SHOWN  
FOR CLARITY

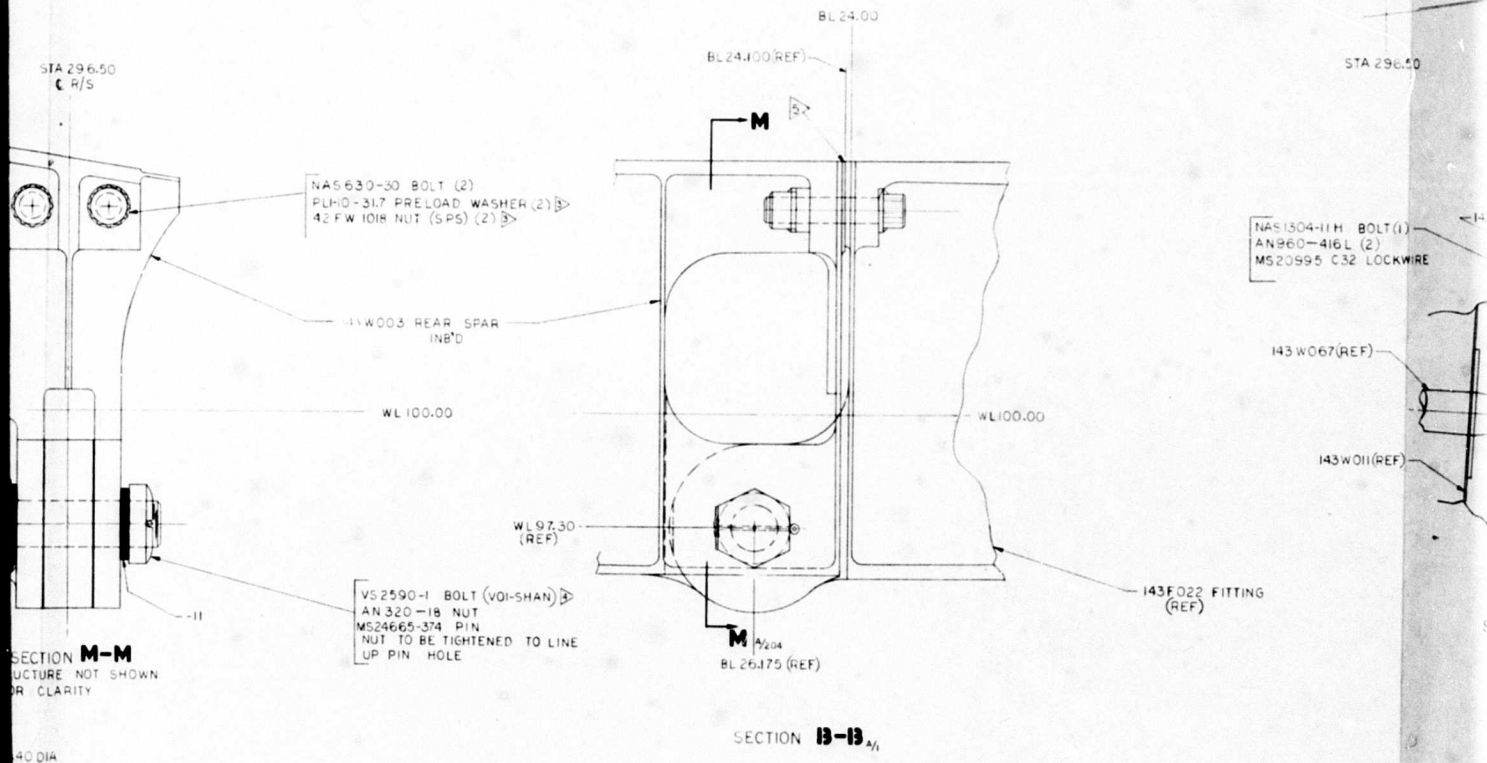


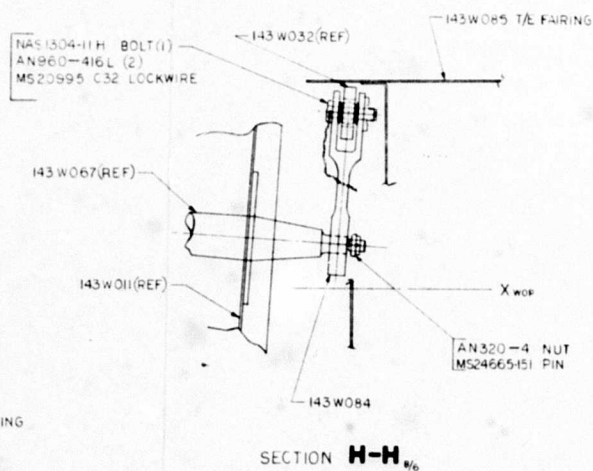
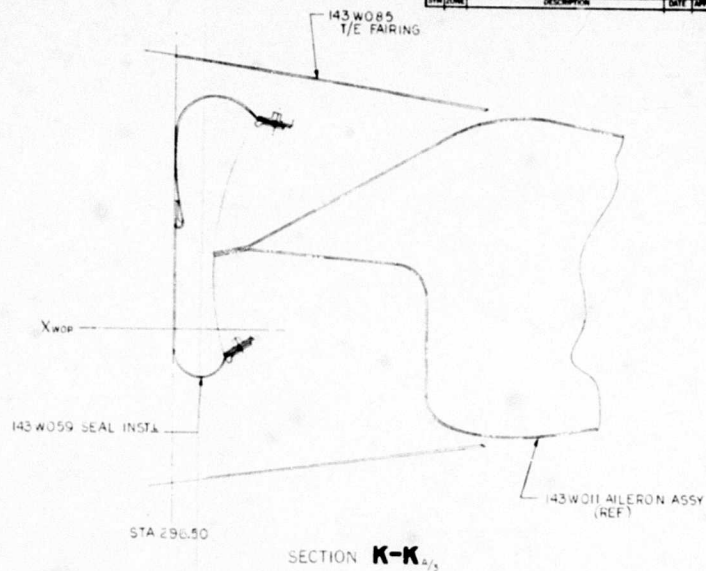
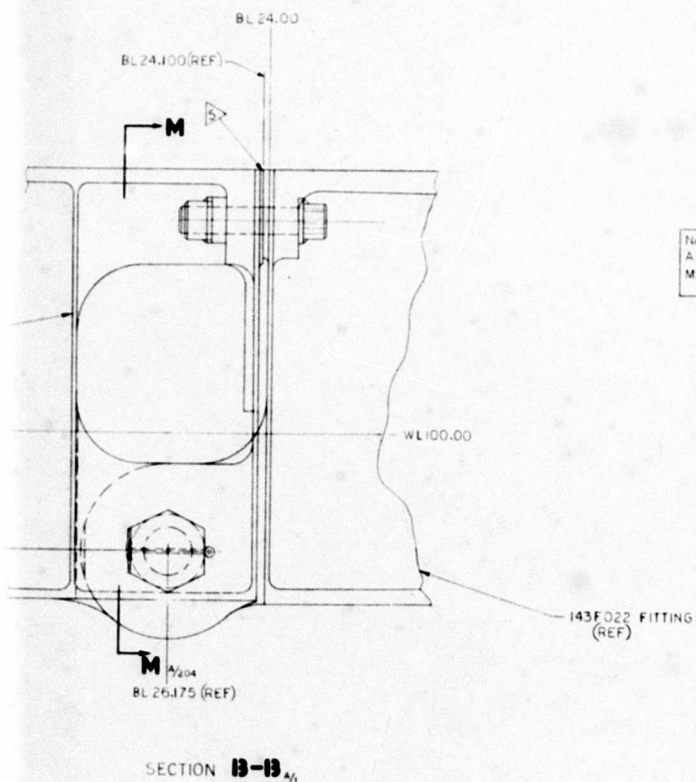
Figure 2 Wing Installation, S



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REVISIONS

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CODE KEY: NO. 78022 J 143W001 REV. 1

SCALE: 1/1 WEIGHT 28 SHEET 2 OF 2

Figure 2 Wing Installation, Sheet 2

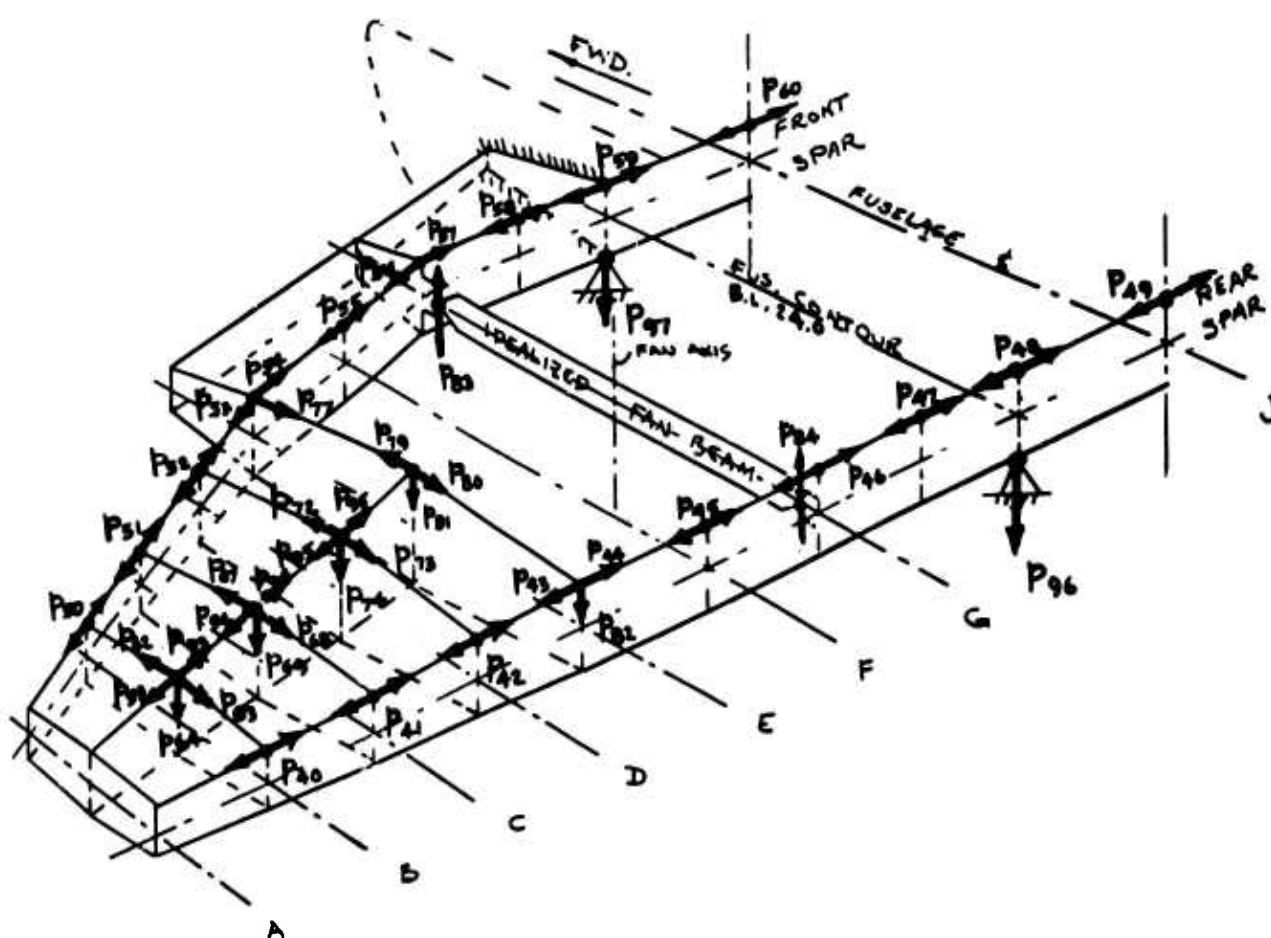


FIGURE 3 GENERAL IDEALIZED BAR FORCES

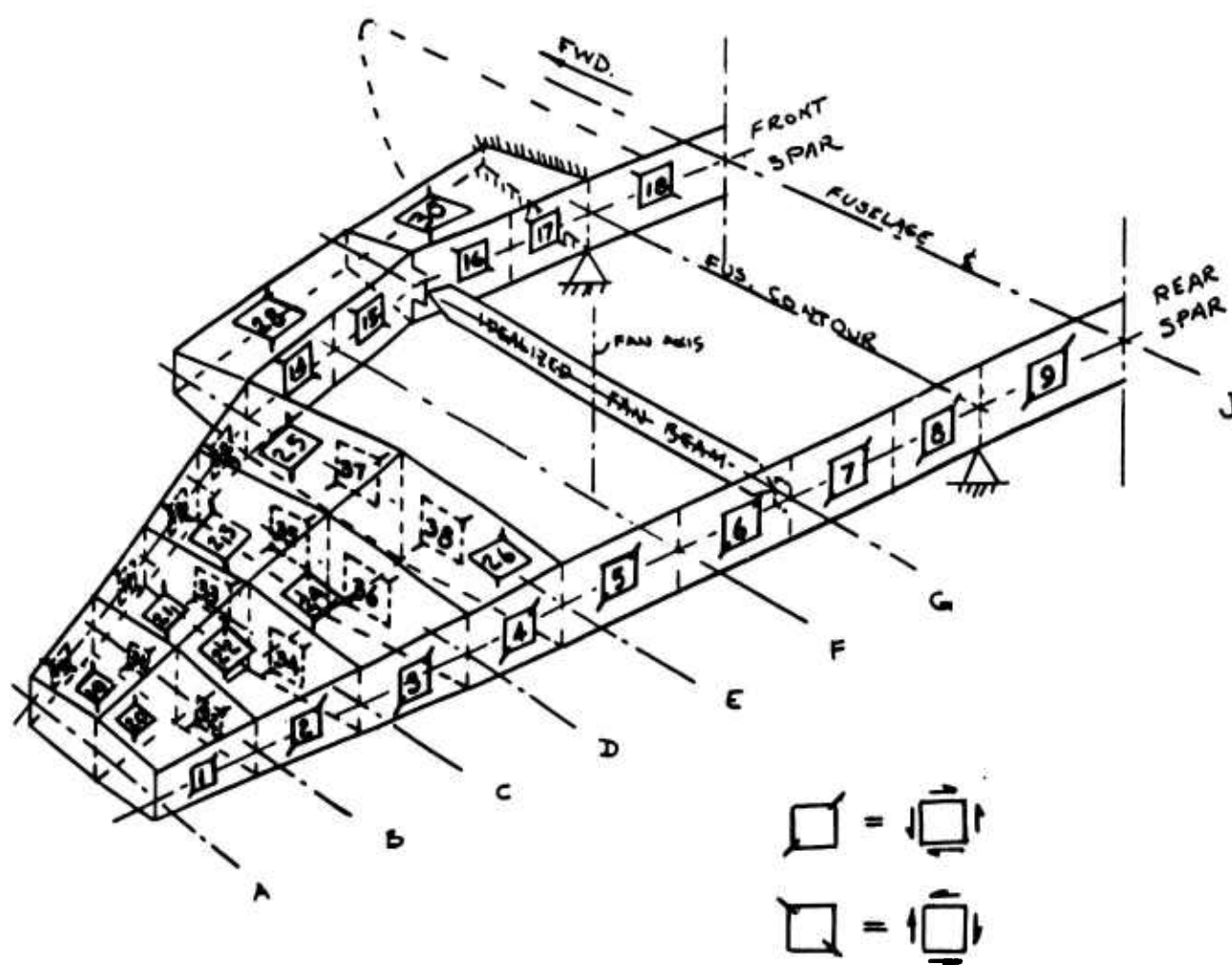


FIGURE 4 GENERAL IDEALIZED PANEL SHEAR FLOWS

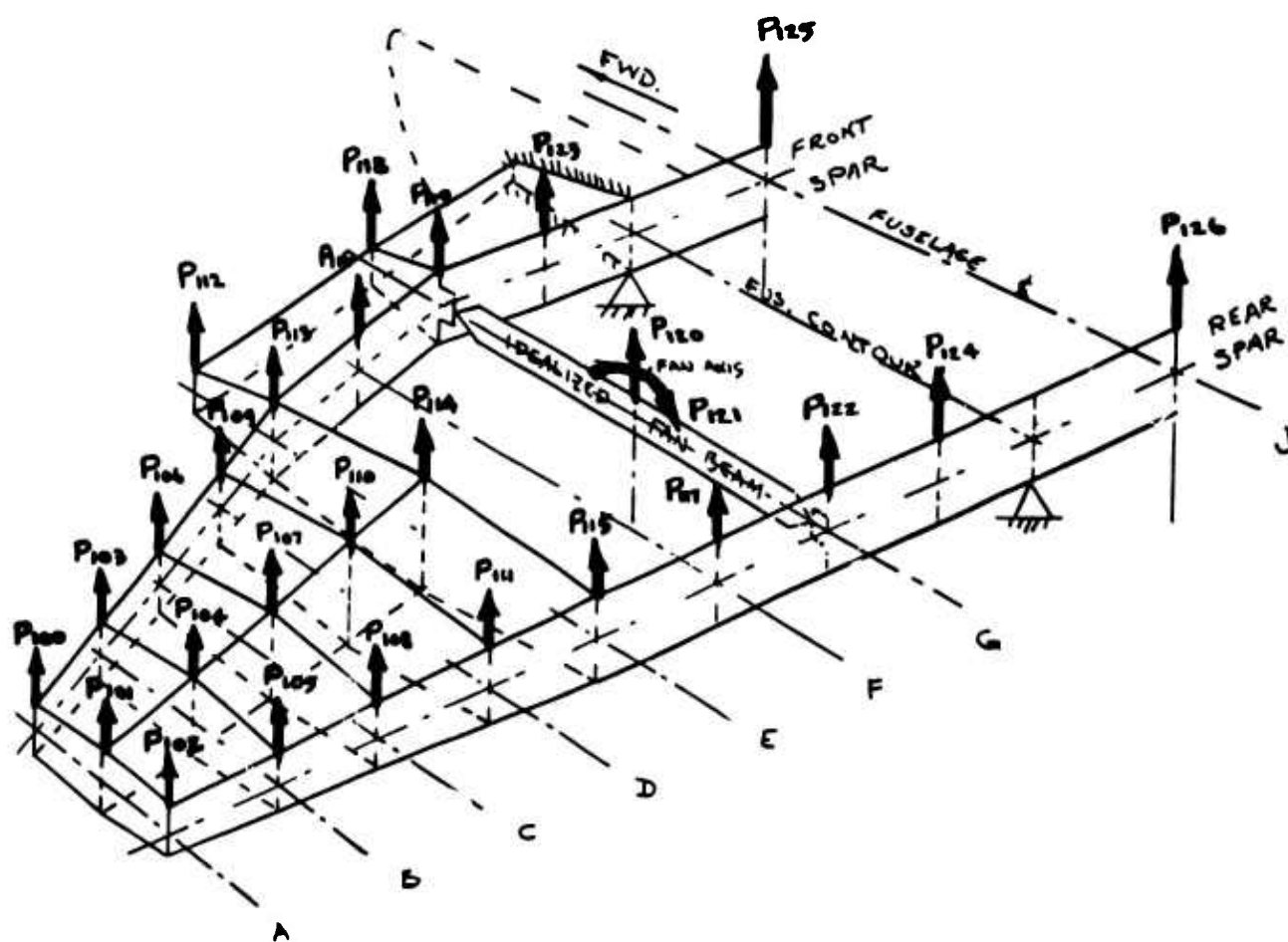


FIGURE 5(a) GENERAL PANEL POINT LOADS NOMENCLATURE



## 8.1

**D. L.**

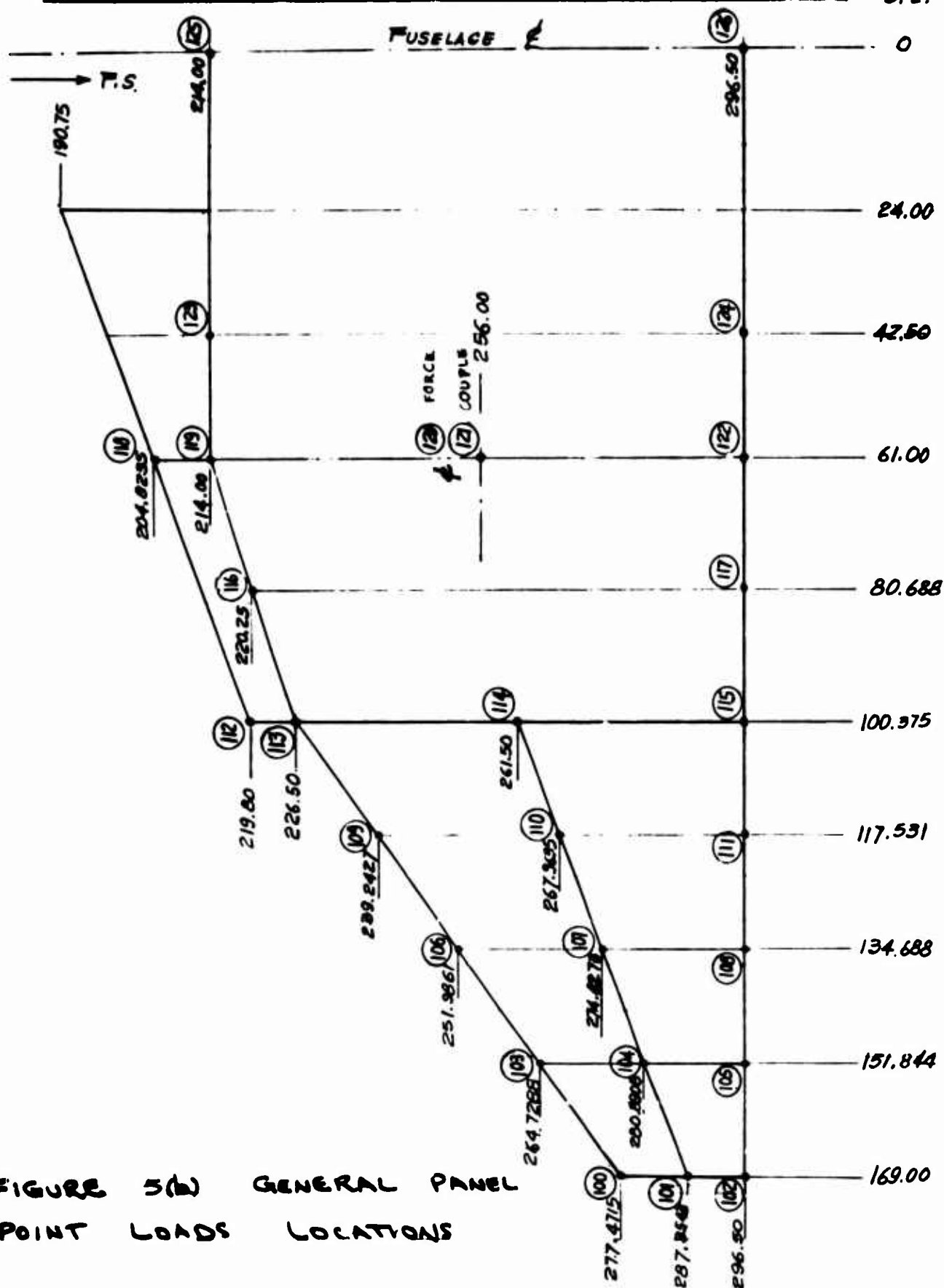


FIGURE 5(b) GENERAL PANEL  
POINT LOADS LOCATIONS

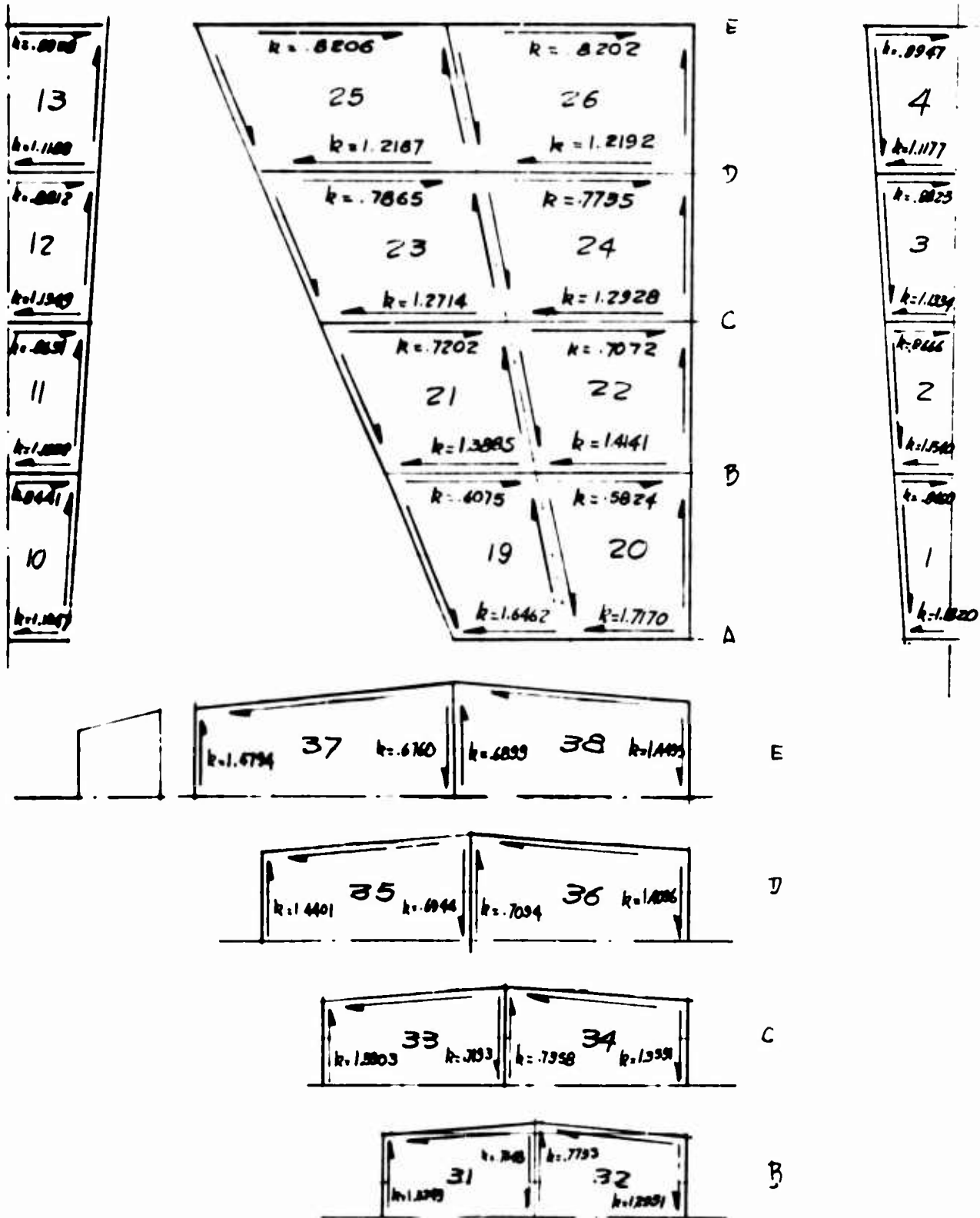
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9



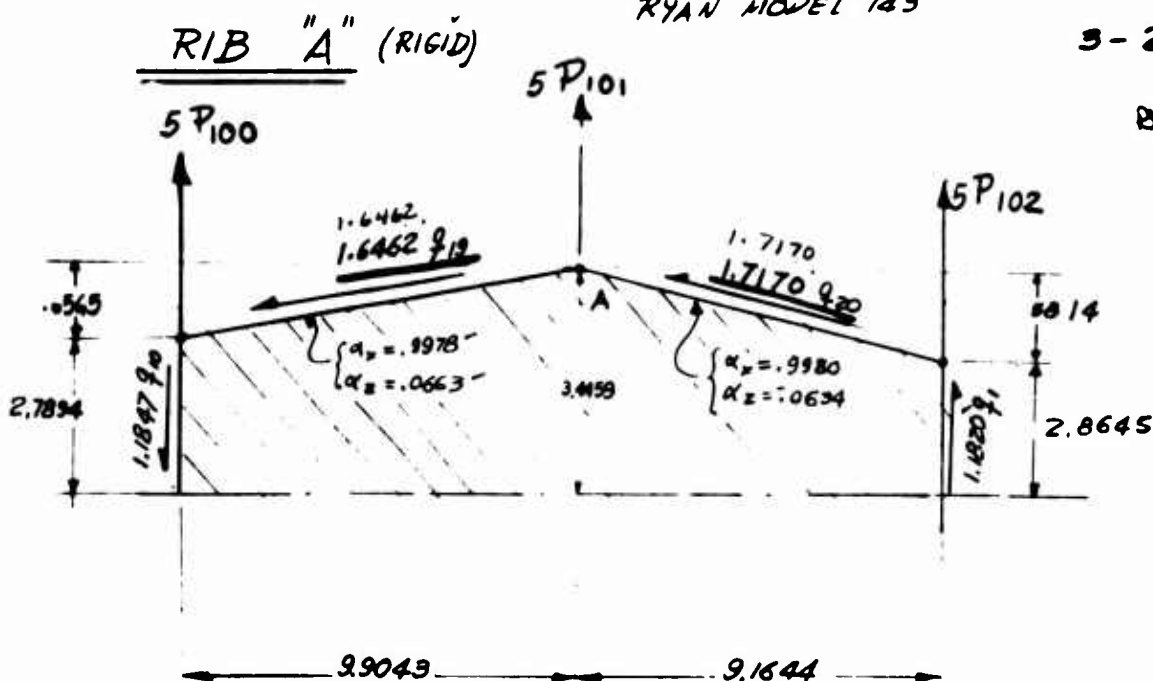
FIGURE 6  
SKETCH OF IDEALIZED STRUCTURE  
SHOWING TRUE BAR LENGTHS  
AND DIRECTION COSINES.

FIGURE 7 OUTER PANEL GEOMETRY -  
SHEAR FLOW FACTORS



### III. EQUATIONS OF STATICS FOR SYMMETRICAL LOADING

Following are the derivations of the seventy equations of statics for symmetrical loading. These equations relate internal forces, redundants, and externally applied panel point loads.



①  $\uparrow \Sigma F_z = 0$

$$5P_{100} + 5P_{101} + 5P_{102} + (2.8645) \times 1.1820 \underline{q_1} - (2.7894) \times 1.1847 \underline{q_{10}} \\ - (.6565) \times 1.6462 \underline{q_{19}} + (.5814) \times 1.7170 \underline{q_{20}} = 0$$

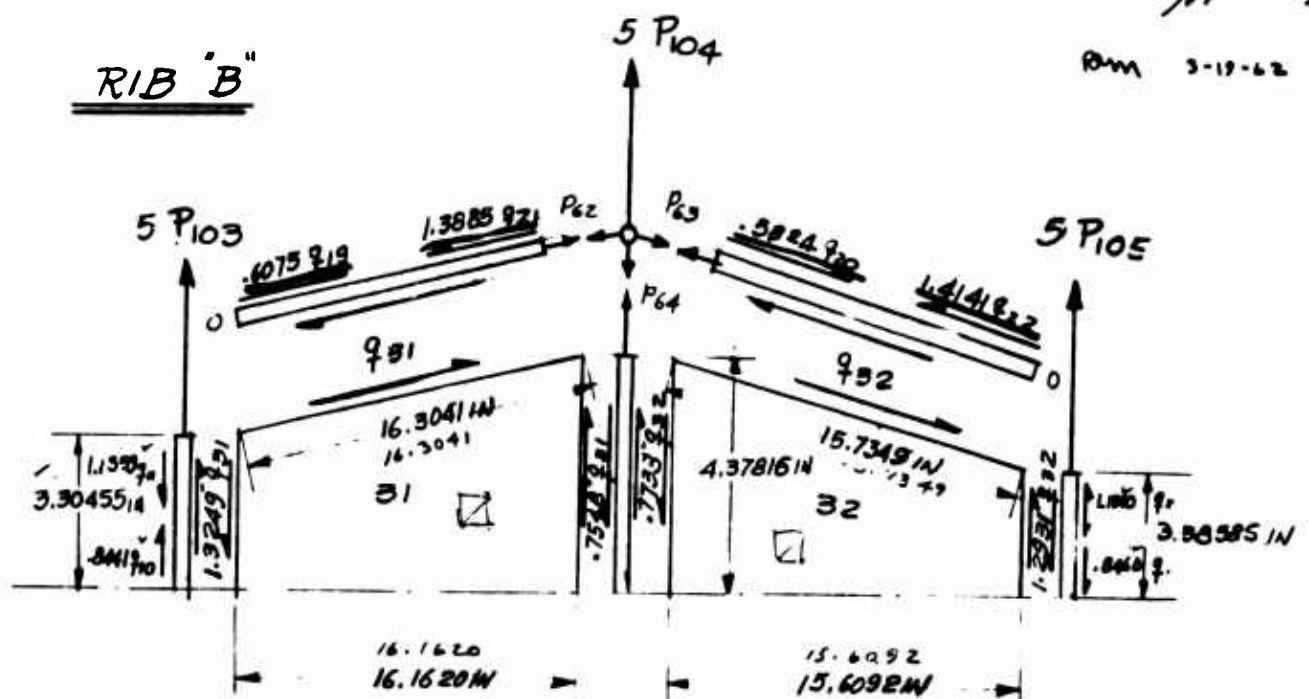
②  $\curvearrowright \Sigma M_A = 0$

$$(9.9049) 5P_{100} - (9.1644) 5P_{102} - (9.9049 \times 2.7894) \times 1.1847 \underline{q_{10}} \\ - (9.1644 \times 2.8645) \times 1.1820 \underline{q_1} = 0$$

SOLVING FACTORS AND TRANSPOSING TERMS (REDUNDANTS & APPLIED LOADS) TO THE R.H.S.

①  $3.3858 \underline{q_1} - 3.3046 \underline{q_{10}} = 1.0807 \underline{q_{19}} - .9983 \underline{q_{20}} - 5P_{100} - 5P_{101} - 5P_{102}$

②  $31.0292 \underline{q_1} + 32.7298 \underline{q_{10}} = 49.5215 P_{100} - 45.8220 P_{102}$



- ③ VERTICAL BAR, FRONT SPAR  $\sum F_z \uparrow = 0$

$$5P_{103} + (3.30455) \times 8441 q_{10} - (3.30455) \times 1.1559 q_{11} + (3.30455) \times 1.3249 q_{31} = 0$$

- ④ VERTICAL BAR, AT STRINGER  $\sum F_z \uparrow = 0$

$$p_{64} - (4.37816) \times .7548 \text{ } f_{31} + (4.87816) \times .7739 \text{ } f_{32} = 0$$

- ⑤ VERTICAL BAR, REAR SPAR  $\sum F_z^{\uparrow} = 0$

$$5 P_{105} - (3.38535) \times 8460 q_1 + (3.38585) \times 1.1540 q_2 - (3.38585) \times 1.2931 q_{32} = 0$$

- ⑥ COVER BAR, FWD,  $\sum F^{\nearrow} = 0$

$$P_{62} + (16.3041) \times 5075 \underline{q}_{19} - (16.3041) \times 1.3885 \underline{q}_{21} - (16.3041) \times \underline{q}_{31} = 0$$

- ⑦ COVER BAR, AFT,  $\sum \vec{F} = 0$

$$-p_{63} + (15.7349) \times 5824 \underline{q_{20}} - (15.7349) \times 1.414 \underline{q_{22}} - (15.7349) \cdot q_{52} = 0$$

RIB 'B' (CONT'D)

v DM 3-17-62

$$\textcircled{8} \text{ POINT AT STRINGER, } \sum F_z^{\uparrow} = 0$$

$$5 P_{104} - .0663 P_{62} - .0634 P_{63} - P_{64} = 0$$

$$\textcircled{9} \text{ POINT AT STRINGER, } \sum F_x^{\rightarrow} = 0$$

$$-.9978 P_{62} + .9980 P_{63} = 0$$

SOLVING FACTORS AND TRANSPOSING APPLIED LOADS AND  
REDUNDANTS TERMS TO THE R.H.S.

$$\textcircled{3} \quad 2.7894 q_{10} - 3.8197 q_{11} + 4.3782 q_{31} = -5 P_{103}$$

$$\textcircled{4} \quad -3.3046 q_{31} + 3.3856 q_{32} + P_{64} = 0$$

$$\textcircled{5} \quad -2.8644 q_1 + 3.9073 q_2 - 4.3782 q_{32} = -5 P_{105}$$

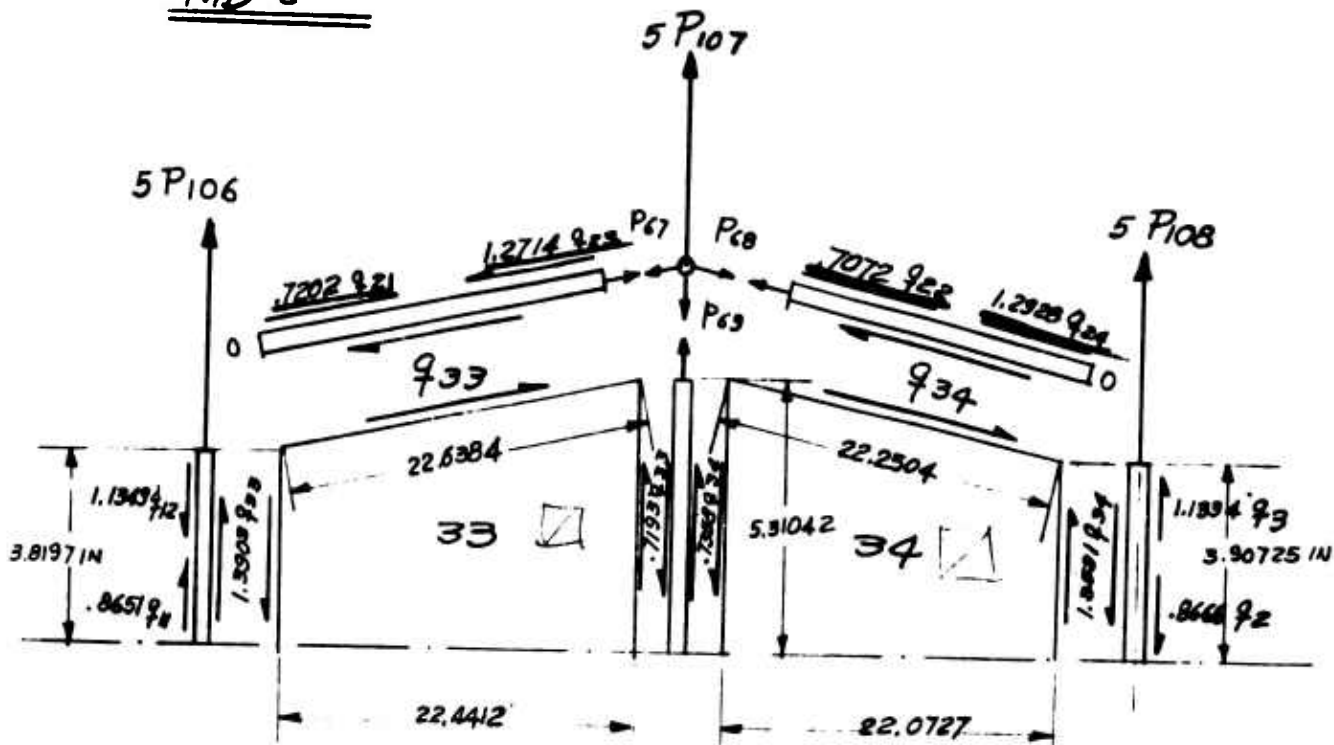
$$\textcircled{6} \quad -16.3041 q_{31} + P_{62} = -9.9047 q_{19} + 22.6382 q_{21}$$

$$\textcircled{7} \quad 15.7349 q_{32} + P_{63} = 9.1640 q_{20} - 22.2507 q_{22}$$

$$\textcircled{8} \quad -.0663 P_{62} - .0634 P_{63} - P_{64} = -5 P_{104}$$

$$\textcircled{9} \quad -.9978 P_{62} + .9980 P_{63} = 0$$

RIB 'C'



- ⑩ VERTICAL BAR, FRONT SPAR  $\sum F_z' = 0$

$$5 P_{106} + (3.8197) \times .8651 q_{11} - (3.8197) \times 1.1349 q_{12} + (3.8197) \times 1.5903 q_{33} = 0$$

- ⑪ VERTICAL BAR, AT STRINGER  $\sum F_z^1 = 0$

$$P_{69} - (5.31042) \times 7.193 \text{ } \cancel{q}_{33} + (5.31042) \times 7.358 \text{ } \cancel{q}_{34} = 0$$

- ⑫ VERTICAL BAR, REAR SPAR  $\sum F_2^{\uparrow} = 0$

$$5 P_{108} - (3.90725) \times 8.666 q_2 + (3.90725) \times 1.1334 q_3 - (3.90725) \times 1.3591 q_{34} = 0$$

- (13) COVER BAR, FWD  $\Sigma F \nearrow = 0$

$$p_{67} + (22.6384) \times 7202 \underline{q_{21}} - (22.6384) \times 1.2714 \underline{q_{23}} - (22.6384) \underline{q_{33}} = 0$$

- ⑭ COVER BAR, AFT  $\Sigma F = 0$

$$-P_{68} + (22.2504) \times .7072 \underline{q_{22}} - (22.2504) \times 1.2990 \underline{q_{24}} - (22.2504) \underline{q_{34}} = 0$$



RIB "C" (CONT'D)

⑬ POINT AT STRINGER,  $\sum F_z^\uparrow = 0$

$$5 P_{107} - 0.663 p_{67} - .0634 p_{68} - p_{69} = 0$$

⑭ POINT AT STRINGER,  $\sum F_x^\rightarrow = 0$

$$-.9978 p_{67} + .9980 p_{68} = 0$$

SOLVING FACTORS, AND TRANSPOSING TERMS (REDUNDANTS & APPLIED LOADS) TO THE R.H.S.

⑩  $3.3044 q_{11} - 4.3350 q_{12} + 5.3105 q_{33} = -5 P_{106}$

⑪  $-3.8198 q_{33} + 3.9074 q_{34} + p_{69} = 0$

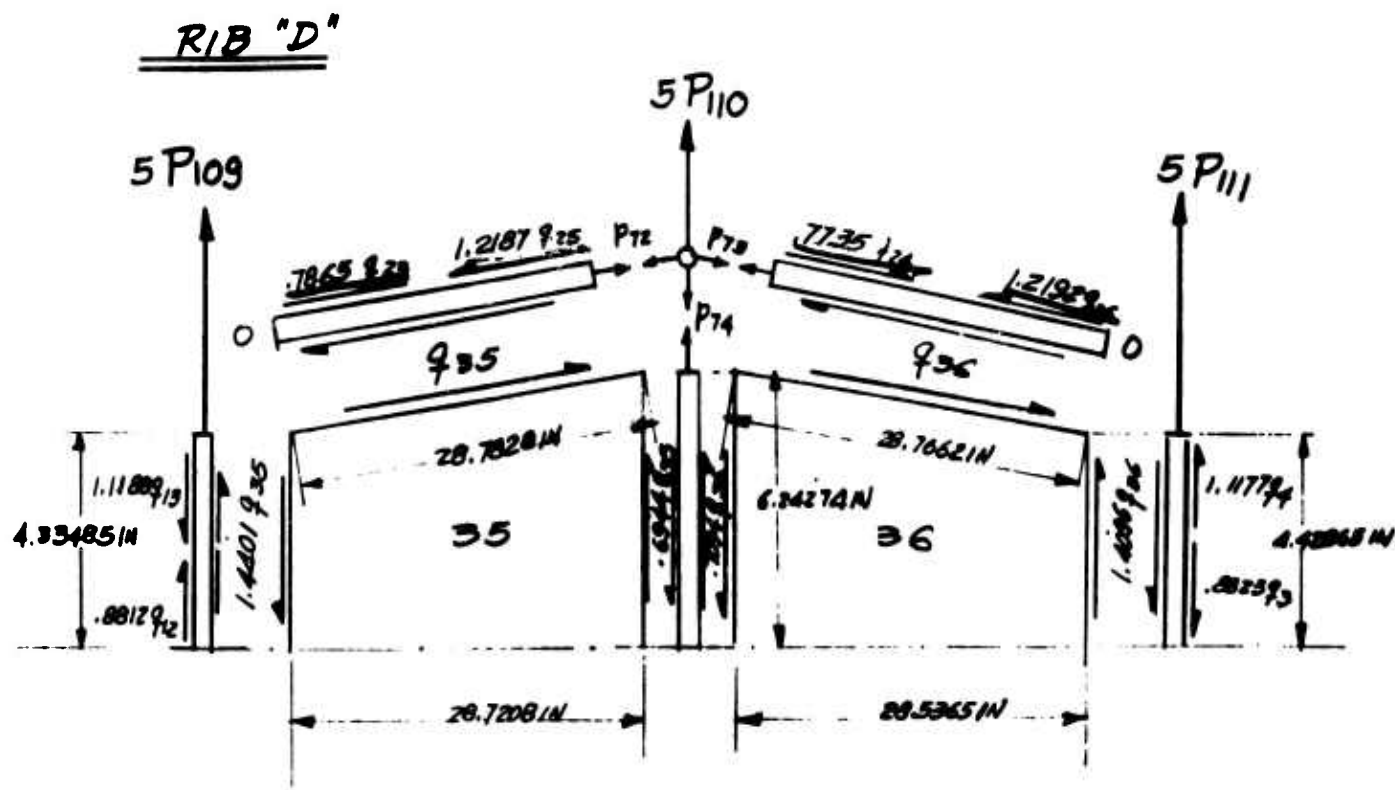
⑫  $-3.3860 q_2 + 4.4285 q_3 - 5.3103 q_{34} = -5 P_{108}$

⑬  $-22.6384 q_{33} + p_{67} = -16.3042 \underline{q_{21}} + 28.7825 \underline{q_{23}}$

⑭  $-22.2304 q_{34} - p_{68} = -15.7355 \underline{q_{22}} + 28.7653 \underline{q_{24}}$

⑮  $-.0663 p_{67} - .0634 p_{68} - p_{69} = -5 P_{107}$

⑯  $-.9978 p_{67} + .9980 p_{68} = 0$



(17) VERTICAL BAR, FRONT SPAR,  $\sum F_z = 0$

$$5P_{109} + (4.33485) \times .88129 q_{12} - (4.33485) \times 1.11809 q_{19} + (4.33485) \times 1.4401 q_{35} = 0$$

(18) VERTICAL BAR, AT STRINGER,  $\sum F_z = 0$

$$P_{74} - (6.24274) \times .6944 q_{35} + (6.24274) \times .7094 q_{36} = 0$$

(19) VERTICAL BAR, REAR SPAR,  $\sum F_z = 0$

$$5P_{111} - (4.42865) \times .8823 q_3 + (4.42865) \times 1.1177 q_4 - (4.42865) \times 1.4406 q_{36} = 0$$

(20) COVER BAR, FWD,  $\sum F = 0$

$$P_{72} + (28.7828) \times .7865 q_{25} - (28.7828) \times 1.2187 q_{25} - (28.7828) q_{35} = 0$$

(21) COVER BAR, REAR,  $\sum F = 0$

$$-P_{73} + (28.7662) \times .7735 q_{24} - (28.7662) \times 1.2192 q_{26} - (28.7662) q_{36} = 0$$

RIB 'D' (CONT'D)

(22) POINT AT STRINGER,  $\sum F_z^\uparrow = 0$

$$5 P_{110} - .0663 p_{72} - .0634 p_{73} - p_{74} = 0$$

(23) POINT AT STRINGER,  $\sum F_x^\rightarrow = 0$

$$-.9978 p_{72} + .9980 p_{73} = 0.$$

SOLVING FACTORS AND TRANSPOSING TERMS (REDUNDANTS & APPLIED FORCES) TO THE R.H.S.

(17)  $3.8199 q_{12} - 4.8498 q_{13} + 6.2426 q_{35} = -5 P_{109}$

(18)  $-4.3350 q_{35} + 4.4286 q_{36} + p_{74} = 0$

(19)  $-3.9074 q_3 + 4.9499 q_4 - 6.2426 q_{35} = -5 P_{111}$

(20)  $-35.0776 q_{25} - 28.7828 q_{35} + p_{72} = -22.6377 q_{23}$


(21)  $-28.7682 q_{36} - p_{73} = -22.2507 q_{24} + 38.0718 q_{26}$

(22)  $-.0663 p_{72} - .0634 p_{73} - p_{74} = -5 P_{110}$

(23)  $-.9978 p_{72} + .9980 p_{73} = 0$

[illegible]

**3-5-62**

- 52 

(25) LEADING. EDGE  $\sum F_z \uparrow = 0$

②⑥ VERTICAL BAR, AT STRINGER,  $\sum F_z = 0$

②⑦ VERTICAL BAR, REAR SPAR,  $\sum F_2' = 0$

$$-(4.950) \times 1.8947 q_4 + (4.950) q_5 - (4.950) \times 1.4495 q_{38} + p_{82} = 0$$

RIB 'E' (CONT'D)

20

(28) COVER BAR, FWD,  $\sum F \rightarrow = 0$

$$(35.077) \times .8206 q_{25} - (35.077) q_{37} - p_{77} + p_{79} = 0$$

(29) COVER BAR, AFT  $\sum F \rightarrow = 0$

$$(35.071) \times .8202 q_{26} - (35.071) q_{38} - p_{80} = 0$$

(30) POINT AT STRINGER,  $\sum F_z \uparrow = 0$

$$5 p_{114} - .0663 p_{79} - .0634 p_{80} - p_{81} = 0$$

(31) POINT AT STRINGER,  $\sum F_x \rightarrow = 0$

$$-.9978 p_{79} + .9980 p_{80} = 0$$

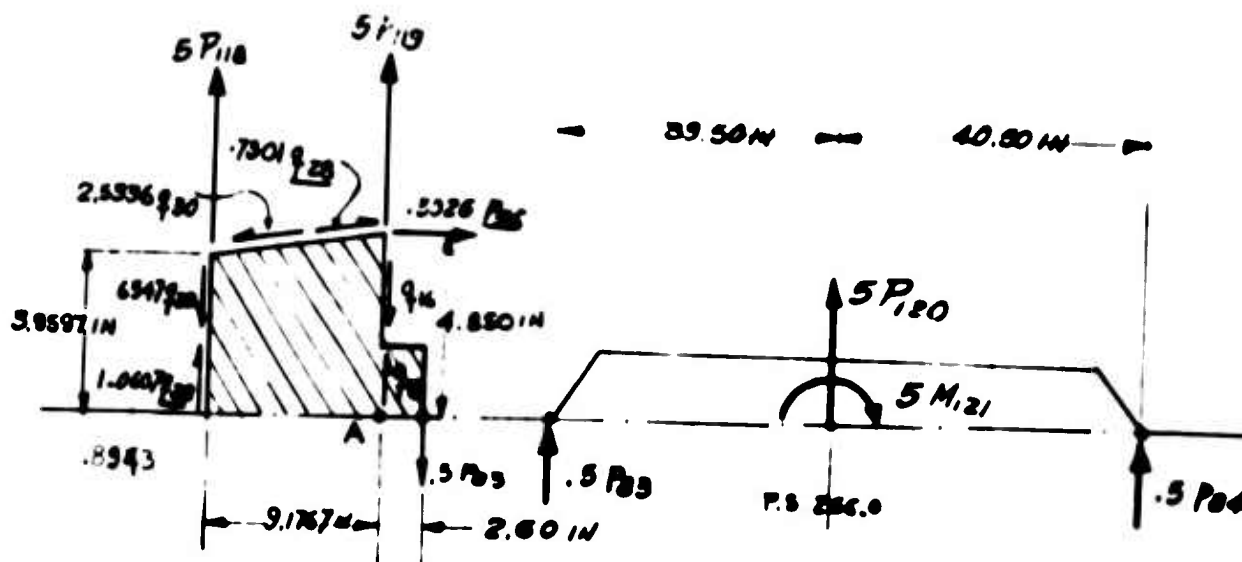
(32) POINT AT REAR SPAR,  $\sum F_z \uparrow = 0$

$$5 p_{115} - .0304 p_{43} - p_{82} = 0$$

SOLVING FACTORS AND TRANSPOSING APPLIED LOADS & REDUNDANT TERMS TO THE R.N.S.

- |      |  |
|------|--|
| (24) | $2.8911 p_{53} - 1.4676 p_{54} + 4.8393 p_{77} = 71.0372 q_{25} - 33.80 p_{112}$                                   |
| (25) | $4.3349 q_{13} - 4.850 q_{14} + 7.175 q_{37} - .0241 p_{53} + .0663 p_{77} = 4.850 q_{25} - 5 p_{112} - 5 p_{113}$ |
| (26) | $-4.8500 q_{37} + 4.9500 q_{38} + p_{81} = 0$  |
| (27) | $-4.4288 q_4 + 4.9500 q_5 - 7.1750 q_{38} + p_{82} = 0$  |
| (28) | $28.7842 q_{25} - 35.077 q_{37} - p_{77} + p_{79} = 0$   |
| (29) | $-35.071 q_{38} - p_{80} = -28.7652 q_{26}$  |
| (30) | $-.0663 p_{79} - .0634 p_{80} - p_{81} = -5 p_{114}$   |
| (31) | $-.9978 p_{79} + .9980 p_{80} = 0$   |
| (32) | $-.0304 p_{43} - p_{82} = -5 p_{115}$  |

RIB 'G'



(33) LEADING EDGE,  $\sum M_y = 0$  AT "A"

$$(9.1767) \cdot 5P_{118} + (4.850) \cdot .5326 P_{25} + \left[ (9.1767)(3.9597) \cdot .6547 + (4.850)(9.1767) \cdot .7301 \right] q_{23} \\ - \left[ (9.1767)(3.9597) \cdot .6547 + (4.850)(9.1767) \cdot 2.5336 \right] q_{30} + (2.500) \cdot .5P_{23} = 0$$

(34) LEADING EDGE  $\sum F_z = 0$

$$5P_{118} + 5P_{119} + (4.850) q_{15} - (4.850) q_{16} + \left[ (3.9597) \cdot .6547 + (.8903) \cdot .7301 \right] q_{23} \\ - \left[ (3.9597) \cdot .6547 + (.8903) \cdot 2.5336 \right] q_{30} - .5P_{23} = 0$$

(35) BEAM,  $\sum M_y = 0$

$$5M_{121} + (39.50) \cdot .5P_{23} - (40.80) \cdot .5P_{24} = 0$$

(36) BEAM,  $\sum F_z = 0$

$$5P_{120} + .5P_{23} + .5P_{24} = 0$$

RYAN MODEL 143

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RUB "E" (CONT'D)

22

$$(33) \quad -196.5527 p_{20} + 1.4676 p_{25} + 1.2500 p_{23} = -71.0372 \underline{p_{18}} - 46.0835 p_{19}$$

$$(34) \quad 4.0500 p_{18} - 4.0000 p_{16} + 4.0481 p_{20} - 5 p_{23} = -4.0500 \underline{p_{18}} - 5 p_{18} - 5 p_{19}$$

$$(35) \quad 19.75 p_{23} - 20.25 p_{24} = -5 M_{121}$$

$$(36) \quad .5 p_{23} + .5 p_{24} = -5 P_{120}$$





3-5-62

24

(37) F, VERTICAL BAR, FRONT SPAR,  $\sum F_z^{\uparrow} = 0$

$$5 P_{116} + (4.850) q_{14} - (4.850) q_{15} = 0$$

(38) T, VERTICAL BAR, REAR SPAR,  $\sum F_z^{\uparrow} = 0$

$$5 P_{117} - (4.950) q_5 + (4.950) q_6 = 0$$

(39) G, VERT. BAR, REAR SPAR  $\sum F_z^{\uparrow} = 0$

$$5 P_{122} - (4.950) q_6 + (4.950) q_7 - .5 P_{24} = 0$$

(40) H, VERT. BAR, F.S.,  $\sum F_z^{\uparrow} = 0$

$$5 P_{123} + (4.850) q_{16} - (4.850) q_{17} = 0$$

(41) H, VERT. BAR, R.S.,  $\sum F_z^{\uparrow} = 0$

$$5 P_{124} - (4.950) q_7 + (4.950) q_8 = 0$$

(42) J, VERT. BAR, F.S.,  $\sum F_z^{\uparrow} = 0$

$$2.50 P_{125} + (4.850) q_{18} = 0$$

(43) J, VERT. BAR, R.S.  $\sum F_z^{\uparrow} = 0$

$$2.50 P_{126} + (4.950) q_9 = 0$$

TRANSPOSING APPLIED LOAD & REDUNDANT TERMS TO R.H.S.

(37)  $4.850 q_{14} - 4.850 q_{15} = -5 P_{116}$

(38)  $-4.950 q_5 + 4.950 q_6 = -5 P_{117}$

(39)  $-4.950 q_6 + 4.950 q_7 - .5 P_{24} = -5 P_{122}$

(40)  $4.850 q_{16} - 4.850 q_{17} = -5 P_{123}$

(41)  $-4.950 q_7 + 4.950 q_8 = -5 P_{124}$

(42)  $4.850 q_{18} = -2.50 P_{125}$

(43)  $-4.950 q_9 = -2.50 P_{126}$

REAR SPAR

$$(44) \text{ REAR SPAR BAR, A-B, } \Sigma \vec{F} = 0$$

$$(17.1639) q_1 - (17.1639) q_{20} - p_{40} = 0$$

$$(45) \text{ R.S. BAR, B-C, } \Sigma \vec{F} = 0$$

$$(17.1639) q_2 - (17.1639) q_{22} + p_{40} - p_{41} = 0$$

$$(46) \text{ R.S. BAR, C-D, } \Sigma \vec{F} = 0$$

$$(17.1649) q_3 - (17.1649) q_{24} + p_{41} - p_{42} = 0$$

$$(47) \text{ R.S. BAR, D-E, } \Sigma \vec{F} = 0$$

$$(17.1639) q_4 - (17.1639) q_{26} + p_{42} - p_{43} = 0$$

$$(48) \text{ R.S. BAR, E-F, } \Sigma \vec{F}_y = 0$$

$$(19.687) q_5 + p_{44} - p_{45} = 0$$

$$(49) \text{ R.S. BAR, F-G, } \Sigma \vec{F}_y = 0$$

$$(19.688) q_6 + p_{45} - p_{46} = 0$$

$$(50) \text{ R.S. BAR, G-H, } \Sigma \vec{F}_y = 0$$

$$(18.500) q_7 + p_{46} - p_{47} = 0$$

$$(51) \text{ R.S. BAR, H-I, } \Sigma \vec{F}_y = 0$$

$$(18.500) q_8 + p_{47} - p_{48} = 0$$

$$(52) \text{ R.S. BAR, I-J, } \Sigma \vec{F}_y = 0$$

$$(24.00) q_9 + p_{48} - p_{49} = 0$$

REAR SPAR (CONT'D)

(53) POINT AT E, REAR SPAR,  $\sum \vec{F}_y = 0$

$$.9995 P_{43} - P_{44} = 0$$

TRANSPOSING APPLIED LOADS AND REDUNDANT TERMS TO R.H.S.

- |      |  |
|------|--|
| (44) | $17.1639 q_1 - P_{40} = 17.1639 \underline{q_{20}}$          |
| (45) | $17.1639 q_2 + P_{40} - P_{41} = 17.1639 \underline{q_{22}}$ |
| (46) | $17.1649 q_3 + P_{41} - P_{42} = 17.1649 \underline{q_{24}}$ |
| (47) | $17.1639 q_4 + P_{42} - P_{43} = 17.1639 \underline{q_{26}}$ |
| (48) | $19.687 q_5 + P_{44} - P_{45} = 0$                           |
| (49) | $19.688 q_6 + P_{45} - P_{46} = 0$                           |
| (50) | $18.500 q_7 + P_{46} - P_{47} = 0$                           |
| (51) | $18.500 q_8 + P_{47} - P_{48} = 0$                           |
| (52) | $24.00 q_9 + P_{48} - P_{49} = 0$                            |
| (53) | $.9995 P_{43} - P_{44} = 0$                                  |

FRONT SPAR.

(54) FRONT SPAR BAR, A-B,  $\sum \vec{F} = 0$

$$-(21.37685) q_{10} + (21.37685) q_{19} - p_{50} = 0$$

(55) F.S. BAR, B-C,  $\sum \vec{F} = 0$

$$-(21.37685) q_{11} + (21.37685) q_{21} + p_{50} - p_{51} = 0$$

(56) F.S. BAR, C-D,  $\sum \vec{F} = 0$

$$-(21.3789) q_{12} + (21.3789) q_{23} + p_{51} - p_{52} = 0$$

(57) F.S. BAR, D-E,  $\sum \vec{F} = 0$

$$-(21.37685) q_{13} + (21.37685) q_{25} + p_{52} - p_{53} = 0$$

(58) F.S. BAR, E-F,  $\sum \vec{F} = 0$

$$-(20.6552) q_{14} - (20.6552) q_{22} + p_{54} - p_{55} = 0$$

(59) F.S. BAR, F-G,  $\sum \vec{F} = 0$

$$-(20.6563) q_{15} - (20.6563) q_{22} + p_{55} - p_{56} = 0$$

(60) F.S. BAR, G-H,  $\sum \vec{F}_y = 0$

$$-(18.500) q_{16} - (18.500) q_{30} + p_{57} - p_{58} = 0$$

(61) F.S. BAR, H-I,  $\sum \vec{F}_y = 0$

$$-(18.500) q_{17} - (18.500) q_{30} + p_{58} - p_{59} = 0$$

(62) F.S. BAR, I-J,  $\sum \vec{F}_y = 0$

$$-(24.000) q_{18} + p_{59} - p_{60} = 0$$

FRONT-SPAR (CONT'D)

(63) F.S. POINT AT "E",  $\sum F_y = 0$

$$.8026 P_{53} - .9531 P_{54} = 0$$

(64) F.S. POINT AT "G",  $\sum F_y = 0$

$$.9531 P_{56} - P_{57} = 0$$

TRANSPOSING APPLIED LOAD & REDUNDANT TERMS TO THE R.H.S.

(54)  $21.87685 q_{10} + P_{50} = 21.87685 \underline{q_{19}}$

(55)  $21.87685 q_{11} - P_{50} + P_{51} = 21.87685 \underline{q_{21}}$

(56)  $21.8789 q_{12} - P_{51} + P_{52} = 21.8789 \underline{q_{23}}$

(57)  $21.87685 q_{13} - 21.87685 q_{25} - P_{52} + P_{53} = 0$

(58)  $20.6552 q_{14} - P_{54} + P_{55} = -20.6552 \underline{q_{28}}$

(59)  $20.6563 q_{15} - P_{55} + P_{56} = -20.6563 \underline{q_{28}}$

(60)  $18.500 q_{16} + 18.500 q_{30} - P_{57} + P_{58} = 0$

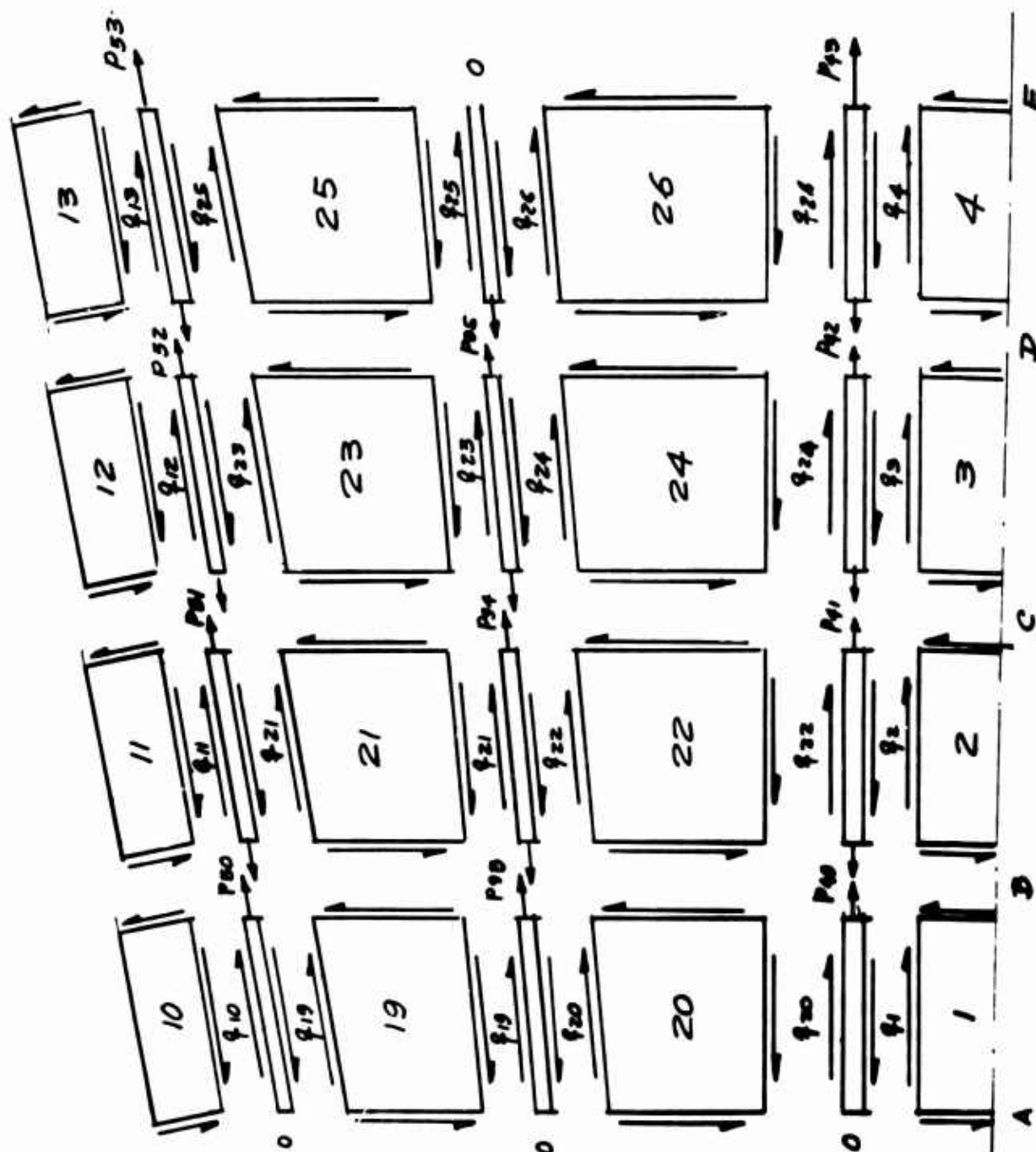
(61)  $18.500 q_{17} + 18.500 q_{30} - P_{58} + P_{59} = 0$

(62)  $24.000 q_{18} - P_{59} + P_{60} = 0$

(63)  $.8026 P_{53} - .9531 P_{54} = 0$

(64)  $.9531 P_{56} - P_{57} = 0$

OUTBOARD OF RID 'E' COVER & SPAR WEBS





STRINGER BAR.

(65) STRINGER-BAR, A-B,  $\sum \vec{F} = 0$

$$-(18.35686) \underline{q}_{19} + (18.35686) \underline{q}_{20} - P_{93} = 0$$

(66) STRINGER-BAR, B-C,  $\sum \vec{F} = 0$

$$-(18.35686) \underline{q}_{21} + (18.35686) \underline{q}_{22} + P_{93} - P_{94} = 0$$

(67) STRINGER-BAR, C-D,  $\sum \vec{F} = 0$

$$-(18.3579) \underline{q}_{23} + (18.3579) \underline{q}_{24} + P_{94} - P_{95} = 0$$

(68) STRINGER-BAR, D-E,  $\sum \vec{F} = 0$

$$-(18.35686) \underline{q}_{25} + (18.35686) \underline{q}_{26} + P_{95} = 0$$

WING SUPPORTS

(69) VERTICAL BAR AT 'I', R.S.  $\sum F_z^\uparrow = 0$

$$-(4.95) \underline{q}_8 + (4.95) \underline{q}_9 - .5 P_{96} = 0$$

(70) VERTICAL BAR AT 'I', F.S.  $\sum F_z^\uparrow = 0$

$$(4.85) \underline{q}_{17} - (4.85) \underline{q}_{18} - .5 P_{97} = 0$$

3-9-62 *NO*STRINGER BAR & WING SUPPORTS

$$(65) \quad p_{93} = -18.35686 \, \underline{q_{19}} + 18.35686 \, \underline{q_{20}}$$

$$(66) \quad p_{93} - p_{94} = 18.35686 \, \underline{q_{21}} - 18.35686 \, \underline{q_{22}}$$

$$(67) \quad p_{94} - p_{95} = 18.3579 \, \underline{q_{23}} - 18.3579 \, \underline{q_{24}}$$

$$(68) \quad 18.35686 \, \underline{q_{25}} - p_{95} = 18.35686 \, \underline{q_{26}}$$

$$(69) \quad 4.95 \, q_8 - 4.95 \, q_9 + .5 \, p_{96} = 0$$

$$(70) \quad 4.85 \, q_{17} - 4.85 \, q_{18} - .5 \, p_{97} = 0$$

## IV. EQUATIONS OF STATICS FOR ANTI-SYMMETRICAL LOADING

The seventy equations of statics for anti-symmetrical loading are identical to those for symmetrical loading with the exception of Equations 42 and 43. These two equations are as follows:

$$(42) \quad p_{49} = 0.$$

$$(43) \quad p_{60} = 0.$$

## V. STRUCTURAL ANALYSIS FOR SYMMETRICAL FLIGHT CONDITIONS

Structural analysis is given in this section for the 16 symmetrical flight conditions defined on page 35.

The flexibility matrix  $A_{IJ}$  (pages 36 - 75) is based upon the loaded-wing section, properties of Configuration 5C. Small effectivity of compression loaded skin was considered in this idealization.

The matrix  $GIRGIM$  (pages 76 - 93) expresses for the "cut" or determinate structure, loads at each of the 78 internal member locations as a function of unit forces at the 8 redundant locations and 27 externally applied force locations.

The matrix shown on pages 94 - 102 is the triple product equal to the transpose of the matrix  $GIRGIM$  times  $A_{IJ}$  times  $GIRGIM$ .

The matrix  $GRN$  on pages 103 and 104 is the solution for the redundants. It expresses the value of each redundant as a function of the 27 unit applied forces.

The matrix  $AMN$  (pages 105 - 111) is the deflection influence matrix for the loaded wing, (Configuration 5C). For the actual redundant structure, it expresses the deflection at each of the 27 external load points as a function of the 27 unit panel point loads. This matrix was used as deflection influence coefficients for flutter analysis.

The matrix  $GIM$  (pages 112 - 119) expresses for the actual or redundant structure the load at each of the 78 internal locations as a function of unit values of the 27 applied loads.

Values of limit panel point loads for 16 symmetrical flight conditions are given on pages 126 - 129.

Actual wing deflections in inches at the 27 panel point locations are given on pages 130-133. (APC)

Actual redundant structure loads (GIC) at each of the 78 internal member locations are given on pages 134-141 for all 16 symmetrical flight conditions. The axial or "P" loads are in pounds limit, and the shear flows or "Q" values are pounds per inch limit.

Stress conversion factors for the 78 internal members are given on page 142. These factors when multiplied by the internal loads give stress in pounds per square inch.

Stress values (SIC) are given on pages 144-151. These are the limit stresses in each of the 78 internal members for all 16 symmetrical flight conditions.

7. JUNE 1963

JOB 1054

## REDUNDANT STRESS ANALYSIS

E = 10400000.0

## 5-C SYMMETRIC LOAD CONDITIONS

| NO. | CODE  | DESCRIPTION  |
|-----|-------|--|
| 1   | PLAFO | +LOW ANGLE, FWD CG, NO THETA, 1 BR (F-1), PULL-UP, PT. B     |
| 2   | PLAFP | +LOW ANGLE, FWD CG, THETA, 2 BR (F-2), PULL-UP, PT. B        |
| 3   | PLAAO | +LOW ANGLE, AFT CG, NO THETA, 3 BR (F-3), PULL-UP, PT. B     |
| 4   | PLAAP | +LOW ANGLE, AFT CG, THETA, 4 BR (F-4), PULL-UP, PT. B        |
| 5   | NMAFO | -MED. ANGLE, FWD CG, NO THETA, 1 DR (F-9), PUSH-OVER, PT. D  |
| 6   | NMAFP | -MED. ANGLE, FWD CG, THETA, 2 DR (F-10), PUSH-OVER, PT. D    |
| 7   | NMAAO | -MED. ANGLE, AFT CG, NO THETA, 3 DR (F-11), PUSH-OVER, PT. D |
| 8   | NMAAP | -MED. ANGLE, AFT CG, THETA, 4 DR (F-12), PUSH-OVER, PT. D    |
| 9   | PHAFO | +HIGH ANGLE, FWD CG, NO THETA, (F-13), PULL-UP, PT. A        |
| 10  | PHAFP | +HIGH ANGLE, FWD CG, THETA, (F-14), PULL-UP, PT. A           |
| 11  | PHAAO | +HIGH ANGLE, AFT CG, NO THETA, (F-15), PULL-UP, PT. A        |
| 12  | PHAAP | +HIGH ANGLE, AFT CG, THETA, (F-16), PULL-UP, PT. A           |
| 13  | NHAFO | -HIGH ANGLE, FWD CG, NO THETA, (F-17), PUSH-OVER, PT. E      |
| 14  | NHAFP | -HIGH ANGLE, FWD CG, THETA, (F-18), PUSH-OVER, PT. E         |
| 15  | NHAAO | -HIGH ANGLE, AFT CG, NO THETA, (F-19), PUSH-OVER, PT. E      |
| 16  | NHAAP | -HIGH ANGLE, AFT CG, THETA, (F-20), PUSH-OVER, PT. E         |

MEMBER FLEXIBILITY INFLUENCE COEFFICIENTS  
CONFIGURATION 5-C

PAGE 36

| (AIJ)  | 1 Q1          | 2 Q2          | 3 Q3          | 4 Q4          |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 8.3774217E 03 | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 7.8200249E 03 | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 7.1509499E 03 | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 6.7041708E 03 |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |



| (AIJ)  | 1 Q1 | 2 Q2 | 3 Q3 | 4 Q4 |
|--------|------|------|------|------|
| 51 P63 | 0.   | 0.   | 0.   | 0.   |
| 52 P64 | 0.   | 0.   | 0.   | 0.   |
| 53 P67 | 0.   | 0.   | 0.   | 0.   |
| 54 P68 | 0.   | 0.   | 0.   | 0.   |
| 55 P69 | 0.   | 0.   | 0.   | 0.   |
| 56 P72 | 0.   | 0.   | 0.   | 0.   |
| 57 P73 | 0.   | 0.   | 0.   | 0.   |
| 58 P74 | 0.   | 0.   | 0.   | 0.   |
| 59 P77 | 0.   | 0.   | 0.   | 0.   |
| 60 P79 | 0.   | 0.   | 0.   | 0.   |
| 61 P80 | 0.   | 0.   | 0.   | 0.   |
| 62 P81 | 0.   | 0.   | 0.   | 0.   |
| 63 P82 | 0.   | 0.   | 0.   | 0.   |
| 64 P83 | 0.   | 0.   | 0.   | 0.   |
| 65 P84 | 0.   | 0.   | 0.   | 0.   |
| 66 P93 | 0.   | 0.   | 0.   | 0.   |
| 67 P94 | 0.   | 0.   | 0.   | 0.   |
| 68 P95 | 0.   | 0.   | 0.   | 0.   |
| 69 P96 | 0.   | 0.   | 0.   | 0.   |
| 70 P97 | 0.   | 0.   | 0.   | 0.   |
| 71 Q19 | 0.   | 0.   | 0.   | 0.   |
| 72 Q20 | 0.   | 0.   | 0.   | 0.   |
| 73 Q21 | 0.   | 0.   | 0.   | 0.   |
| 74 Q22 | 0.   | 0.   | 0.   | 0.   |
| 75 Q23 | 0.   | 0.   | 0.   | 0.   |
| 76 Q24 | 0.   | 0.   | 0.   | 0.   |
| 77 Q26 | 0.   | 0.   | 0.   | 0.   |
| 78 Q28 | 0.   | 0.   | 0.   | 0.   |

| (A J)  | 5 Q5          | 6 Q6          | 7 Q7          | 8 Q8          |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 7.0381297E 03 | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 6.2564381E 03 | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 5.1872830E 03 | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 4.2928224E 03 |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| (AIJ)  | 5 Q5 | 6 Q6 | 7 Q7 | 8 Q8 |
|--------|------|------|------|------|
| 51 P63 | 0.   | 0.   | 0.   | 0.   |
| 52 P64 | 0.   | 0.   | 0.   | 0.   |
| 53 P67 | 0.   | 0.   | 0.   | 0.   |
| 54 P68 | 0.   | 0.   | 0.   | 0.   |
| 55 P69 | 0.   | 0.   | 0.   | 0.   |
| 56 P72 | 0.   | 0.   | 0.   | 0.   |
| 57 P73 | 0.   | 0.   | 0.   | 0.   |
| 58 P74 | 0.   | 0.   | 0.   | 0.   |
| 59 P77 | 0.   | 0.   | 0.   | 0.   |
| 60 P79 | 0.   | 0.   | 0.   | 0.   |
| 61 P80 | 0.   | 0.   | 0.   | 0.   |
| 62 P81 | 0.   | 0.   | 0.   | 0.   |
| 63 P82 | 0.   | 0.   | 0.   | 0.   |
| 64 P83 | 0.   | 0.   | 0.   | 0.   |
| 65 P84 | 0.   | 0.   | 0.   | 0.   |
| 66 P93 | 0.   | 0.   | 0.   | 0.   |
| 67 P94 | 0.   | 0.   | 0.   | 0.   |
| 68 P95 | 0.   | 0.   | 0.   | 0.   |
| 69 P96 | 0.   | 0.   | 0.   | 0.   |
| 70 P97 | 0.   | 0.   | 0.   | 0.   |
| 71 Q19 | 0.   | 0.   | 0.   | 0.   |
| 72 Q20 | 0.   | 0.   | 0.   | 0.   |
| 73 Q21 | 0.   | 0.   | 0.   | 0.   |
| 74 Q22 | 0.   | 0.   | 0.   | 0.   |
| 75 Q23 | 0.   | 0.   | 0.   | 0.   |
| 76 Q24 | 0.   | 0.   | 0.   | 0.   |
| 77 Q26 | 0.   | 0.   | 0.   | 0.   |
| 78 Q28 | 0.   | 0.   | 0.   | 0.   |

| (A1J)  | 9 Q9          | 10 Q10        | 11 Q11        | 12 Q12        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 7.6267024E 03 | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 1.0174928E 04 | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 9.5155935E 03 | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 8.7139099E 03 |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| (AIJ)  | 9 09 | 10 010 | 11 011 | 12 012 |
|--------|------|--------|--------|--------|
| 51 P63 | 0.   | 0.     | 0.     | 0.     |
| 52 P64 | 0.   | 0.     | 0.     | 0.     |
| 53 P67 | 0.   | 0.     | 0.     | 0.     |
| 54 P68 | 0.   | 0.     | 0.     | 0.     |
| 55 P69 | 0.   | 0.     | 0.     | 0.     |
| 56 P72 | 0.   | 0.     | 0.     | 0.     |
| 57 P73 | 0.   | 0.     | 0.     | 0.     |
| 58 P74 | 0.   | 0.     | 0.     | 0.     |
| 59 P77 | 0.   | 0.     | 0.     | 0.     |
| 60 P79 | 0.   | 0.     | 0.     | 0.     |
| 61 P80 | 0.   | 0.     | 0.     | 0.     |
| 62 P81 | 0.   | 0.     | 0.     | 0.     |
| 63 P82 | 0.   | 0.     | 0.     | 0.     |
| 64 P83 | 0.   | 0.     | 0.     | 0.     |
| 65 P84 | 0.   | 0.     | 0.     | 0.     |
| 66 P93 | 0.   | 0.     | 0.     | 0.     |
| 67 P94 | 0.   | 0.     | 0.     | 0.     |
| 68 P95 | 0.   | 0.     | 0.     | 0.     |
| 69 P96 | 0.   | 0.     | 0.     | 0.     |
| 70 P97 | 0.   | 0.     | 0.     | 0.     |
| 71 Q19 | 0.   | 0.     | 0.     | 0.     |
| 72 Q20 | 0.   | 0.     | 0.     | 0.     |
| 73 Q21 | 0.   | 0.     | 0.     | 0.     |
| 74 Q22 | 0.   | 0.     | 0.     | 0.     |
| 75 Q23 | 0.   | 0.     | 0.     | 0.     |
| 76 Q24 | 0.   | 0.     | 0.     | 0.     |
| 77 Q26 | 0.   | 0.     | 0.     | 0.     |
| 78 Q28 | 0.   | 0.     | 0.     | 0.     |

| (AIJ)  | 13 Q13        | 14 Q14        | 15 Q15        | 16 Q16        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 8.1785749E 03 | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 6.4311910E 03 | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 5.7883847E 03 | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 4.1473110E 03 |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| (A1J)  | 13 Q13 | 14 Q14 | 15 Q15 | 16 Q16 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| (A1J)  | 17 Q17        | 18 Q18        | 19 Q25        | 20 Q30        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 3.3231666E 03 | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 6.5935000E 03 | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 4.5670133E 04 | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 6.0327421E 04 |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |



| (AIJ)  | 17 017 | 18 018 | 19 029 | 20 030 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 019 | 0.     | 0.     | 0.     | 0.     |
| 72 020 | 0.     | 0.     | 0.     | 0.     |
| 73 021 | 0.     | 0.     | 0.     | 0.     |
| 74 022 | 0.     | 0.     | 0.     | 0.     |
| 75 023 | 0.     | 0.     | 0.     | 0.     |
| 76 024 | 0.     | 0.     | 0.     | 0.     |
| 77 026 | 0.     | 0.     | 0.     | 0.     |
| 78 028 | 0.     | 0.     | 0.     | 0.     |

| (AIJ)  | 21 Q31        | 22 Q32        | 23 Q33        | 24 Q34        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q23 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 9.7006092E 03 | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 9.4679530E 03 | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 1.6007063E 04 | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 1.5895188E 04 |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| (AIJ)  | 21 031 | 22 032 | 23 033 | 24 034 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P91 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| (AIJ)  | 25 Q35        | 26 Q36        | 27 Q37        | 28 Q38        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 1.2658213E 04 | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 1.2688517E 04 | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 1.3509631E 04 | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 1.3621977E 04 |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| (AIJ)  | 25 Q35 | 26 Q36 | 27 Q37 | 28 Q38 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| (AIJ)  | 29 P40        | 30 P41        | 31 P42        | 32 P43        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 1.2956400E 02 | 2.4256000E 01 | 1.4584000E 01 | 0.            |
| 30 P41 | 2.4256000E 01 | 7.5400000E 01 | 0.            | 0.            |
| 31 P42 | 0.            | 1.4584000E 01 | 4.8094000E 01 | 1.0190000E 01 |
| 32 P43 | 0.            | 0.            | 1.0190000E 01 | 1.9056000E 01 |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| (AIJ)  | 29 P40 | 30 P41 | 31 P42 | 32 P43 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| (AIJ)  | 33 P44        | 34 P45        | 35 P46        | 36 P47        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q29 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 2.1491000E 01 | 9.7270000E 00 | 0.            | 0.            |
| 34 P45 | 9.7270000E 00 | 3.2753000E 01 | 7.0400000E 00 | 0.            |
| 35 P46 | 0.            | 7.0400000E 00 | 2.4123000E 01 | 5.1350000E 00 |
| 36 P47 | 0.            | 0.            | 5.1350000E 00 | 1.8921000E 01 |
| 37 P48 | 0.            | 0.            | 0.            | 4.7539999E 00 |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |



| (AIJ)  | 33 P44 | 34 P45 | 35 P46 | 36 P47 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| (A1J)  | 37 P48        | 38 P49        | 39 P50        | 40 P51        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 4.7539999E 00 | 0.            | 0.            | 0.            |
| 37 P48 | 2.3495000E 01 | 6.3279999E 00 | 0.            | 0.            |
| 38 P49 | 6.3279999E 00 | 1.1754000E 01 | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 1.5811000E 02 | 2.9886000E 01 |
| 40 P51 | 0.            | 0.            | 2.9886000E 01 | 9.4529999E 01 |
| 41 P52 | 0.            | 0.            | 0.            | 1.9312000E 01 |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| (AIJ)  | 37 P48 | 38 P49 | 39 P50 | 40 P51 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| (AIJI) | 41 P52        | 42 P53        | 43 P54        | 44 P55        |
|--------|---------------|---------------|---------------|---------------|
| 1 01   | 0.            | 0.            | 0.            | 0.            |
| 2 02   | 0.            | 0.            | 0.            | 0.            |
| 3 03   | 0.            | 0.            | 0.            | 0.            |
| 4 04   | 0.            | 0.            | 0.            | 0.            |
| 5 05   | 0.            | 0.            | 0.            | 0.            |
| 6 06   | 0.            | 0.            | 0.            | 0.            |
| 7 07   | 0.            | 0.            | 0.            | 0.            |
| 8 08   | 0.            | 0.            | 0.            | 0.            |
| 9 09   | 0.            | 0.            | 0.            | 0.            |
| 10 010 | 0.            | 0.            | 0.            | 0.            |
| 11 011 | 0.            | 0.            | 0.            | 0.            |
| 12 012 | 0.            | 0.            | 0.            | 0.            |
| 13 013 | 0.            | 0.            | 0.            | 0.            |
| 14 014 | 0.            | 0.            | 0.            | 0.            |
| 15 015 | 0.            | 0.            | 0.            | 0.            |
| 16 016 | 0.            | 0.            | 0.            | 0.            |
| 17 017 | 0.            | 0.            | 0.            | 0.            |
| 18 018 | 0.            | 0.            | 0.            | 0.            |
| 19 029 | 0.            | 0.            | 0.            | 0.            |
| 20 030 | 0.            | 0.            | 0.            | 0.            |
| 21 031 | 0.            | 0.            | 0.            | 0.            |
| 22 032 | 0.            | 0.            | 0.            | 0.            |
| 23 033 | 0.            | 0.            | 0.            | 0.            |
| 24 034 | 0.            | 0.            | 0.            | 0.            |
| 25 035 | 0.            | 0.            | 0.            | 0.            |
| 26 036 | 0.            | 0.            | 0.            | 0.            |
| 27 037 | 0.            | 0.            | 0.            | 0.            |
| 28 038 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 1.9312000E 01 | 0.            | 0.            | 0.            |
| 41 P52 | 6.8127999E 01 | 1.5880000E 01 | 0.            | 0.            |
| 42 P53 | 1.9880000E 01 | 3.1136000E 01 | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 3.1674000E 01 | 1.3633000E 01 |
| 44 P55 | 0.            | 0.            | 1.3633000E 01 | 4.2462000E 01 |
| 45 P56 | 0.            | 0.            | 0.            | 8.8929999E 00 |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| (A)J)  | 41 P52 | 42 P53 | 43 P54 | 44 P55 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| (A1J)  | 45 P56        | 46 P57        | 47 P58        | 48 P59        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 8.8929999E 00 | 0.            | 0.            | 0.            |
| 45 P56 | 1.7051000E 01 | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 1.3483000E 01 | 6.1709999E 00 | 0.            |
| 47 P58 | 0.            | 6.1709999E 00 | 2.0858000E 01 | 4.9040000E 00 |
| 48 P59 | 0.            | 0.            | 4.9040000E 00 | 2.2335000E 01 |
| 49 P60 | 0.            | 0.            | 0.            | 5.7500000E 00 |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| (AIJ)  | 45 P56 | 46 P57 | 47 P58 | 48 P59 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| (AIJ)  | 49 P60        | 50 P62        | 51 P63 | 52 P64 |
|--------|---------------|---------------|--------|--------|
| 1 Q1   | 0.            | 0.            | 0.     | 0.     |
| 2 Q2   | 0.            | 0.            | 0.     | 0.     |
| 3 Q3   | 0.            | 0.            | 0.     | 0.     |
| 4 Q4   | 0.            | 0.            | 0.     | 0.     |
| 5 Q5   | 0.            | 0.            | 0.     | 0.     |
| 6 Q6   | 0.            | 0.            | 0.     | 0.     |
| 7 Q7   | 0.            | 0.            | 0.     | 0.     |
| 8 Q8   | 0.            | 0.            | 0.     | 0.     |
| 9 Q9   | 0.            | 0.            | 0.     | 0.     |
| 10 Q10 | 0.            | 0.            | 0.     | 0.     |
| 11 Q11 | 0.            | 0.            | 0.     | 0.     |
| 12 Q12 | 0.            | 0.            | 0.     | 0.     |
| 13 Q13 | 0.            | 0.            | 0.     | 0.     |
| 14 Q14 | 0.            | 0.            | 0.     | 0.     |
| 15 Q15 | 0.            | 0.            | 0.     | 0.     |
| 16 Q16 | 0.            | 0.            | 0.     | 0.     |
| 17 Q17 | 0.            | 0.            | 0.     | 0.     |
| 18 Q18 | 0.            | 0.            | 0.     | 0.     |
| 19 Q25 | 0.            | 0.            | 0.     | 0.     |
| 20 Q30 | 0.            | 0.            | 0.     | 0.     |
| 21 Q31 | 0.            | 0.            | 0.     | 0.     |
| 22 Q32 | 0.            | 0.            | 0.     | 0.     |
| 23 Q33 | 0.            | 0.            | 0.     | 0.     |
| 24 Q34 | 0.            | 0.            | 0.     | 0.     |
| 25 Q35 | 0.            | 0.            | 0.     | 0.     |
| 26 Q36 | 0.            | 0.            | 0.     | 0.     |
| 27 Q37 | 0.            | 0.            | 0.     | 0.     |
| 28 Q38 | 0.            | 0.            | 0.     | 0.     |
| 29 P40 | 0.            | 0.            | 0.     | 0.     |
| 30 P41 | 0.            | 0.            | 0.     | 0.     |
| 31 P42 | 0.            | 0.            | 0.     | 0.     |
| 32 P43 | 0.            | 0.            | 0.     | 0.     |
| 33 P44 | 0.            | 0.            | 0.     | 0.     |
| 34 P45 | 0.            | 0.            | 0.     | 0.     |
| 35 P46 | 0.            | 0.            | 0.     | 0.     |
| 36 P47 | 0.            | 0.            | 0.     | 0.     |
| 37 P48 | 0.            | 0.            | 0.     | 0.     |
| 38 P49 | 0.            | 0.            | 0.     | 0.     |
| 39 P50 | 0.            | 0.            | 0.     | 0.     |
| 40 P51 | 0.            | 0.            | 0.     | 0.     |
| 41 P52 | 0.            | 0.            | 0.     | 0.     |
| 42 P53 | 0.            | 0.            | 0.     | 0.     |
| 43 P54 | 0.            | 0.            | 0.     | 0.     |
| 44 P55 | 0.            | 0.            | 0.     | 0.     |
| 45 P56 | 0.            | 0.            | 0.     | 0.     |
| 46 P57 | 0.            | 0.            | 0.     | 0.     |
| 47 P58 | 0.            | 0.            | 0.     | 0.     |
| 48 P59 | 5.7500000E 00 | 0.            | 0.     | 0.     |
| 49 P60 | 1.0823000E 01 | 0.            | 0.     | 0.     |
| 50 P62 | 0.            | 2.1064000E 01 | 0.     | 0.     |



| (AIJ)  | 49 P60 | 50 P62 | 51 P63        | 52 P64 |
|--------|--------|--------|---------------|--------|
| 51 P63 | 0.     | 0.     | 2.0508000E 01 | 0.     |
| 52 P64 | 0.     | 0.     | 0.            | 0.     |
| 53 P67 | 0.     | 0.     | 0.            | 0.     |
| 54 P68 | 0.     | 0.     | 0.            | 0.     |
| 55 P69 | 0.     | 0.     | 0.            | 0.     |
| 56 P72 | 0.     | 0.     | 0.            | 0.     |
| 57 P73 | 0.     | 0.     | 0.            | 0.     |
| 58 P74 | 0.     | 0.     | 0.            | 0.     |
| 59 P77 | 0.     | 0.     | 0.            | 0.     |
| 60 P79 | 0.     | 0.     | 0.            | 0.     |
| 61 P80 | 0.     | 0.     | 0.            | 0.     |
| 62 P81 | 0.     | 0.     | 0.            | 0.     |
| 63 P82 | 0.     | 0.     | 0.            | 0.     |
| 64 P83 | 0.     | 0.     | 0.            | 0.     |
| 65 P84 | 0.     | 0.     | 0.            | 0.     |
| 66 P93 | 0.     | 0.     | 0.            | 0.     |
| 67 P94 | 0.     | 0.     | 0.            | 0.     |
| 68 P95 | 0.     | 0.     | 0.            | 0.     |
| 69 P96 | 0.     | 0.     | 0.            | 0.     |
| 70 P97 | 0.     | 0.     | 0.            | 0.     |
| 71 Q19 | 0.     | 0.     | 0.            | 0.     |
| 72 Q20 | 0.     | 0.     | 0.            | 0.     |
| 73 Q21 | 0.     | 0.     | 0.            | 0.     |
| 74 Q22 | 0.     | 0.     | 0.            | 0.     |
| 75 Q23 | 0.     | 0.     | 0.            | 0.     |
| 76 Q24 | 0.     | 0.     | 0.            | 0.     |
| 77 Q26 | 0.     | 0.     | 0.            | 0.     |
| 78 Q28 | 0.     | 0.     | 0.            | 0.     |

| (AIJ)  | 53 P67 | 54 P68 | 55 P69 | 56 P72 |
|--------|--------|--------|--------|--------|
| 1 Q1   | 0.     | 0.     | 0.     | 0.     |
| 2 Q2   | 0.     | 0.     | 0.     | 0.     |
| 3 Q3   | 0.     | 0.     | 0.     | 0.     |
| 4 Q4   | 0.     | 0.     | 0.     | 0.     |
| 5 Q5   | 0.     | 0.     | 0.     | 0.     |
| 6 Q6   | 0.     | 0.     | 0.     | 0.     |
| 7 Q7   | 0.     | 0.     | 0.     | 0.     |
| 8 Q8   | 0.     | 0.     | 0.     | 0.     |
| 9 Q9   | 0.     | 0.     | 0.     | 0.     |
| 10 Q10 | 0.     | 0.     | 0.     | 0.     |
| 11 Q11 | 0.     | 0.     | 0.     | 0.     |
| 12 Q12 | 0.     | 0.     | 0.     | 0.     |
| 13 Q13 | 0.     | 0.     | 0.     | 0.     |
| 14 Q14 | 0.     | 0.     | 0.     | 0.     |
| 15 Q15 | 0.     | 0.     | 0.     | 0.     |
| 16 Q16 | 0.     | 0.     | 0.     | 0.     |
| 17 Q17 | 0.     | 0.     | 0.     | 0.     |
| 18 Q18 | 0.     | 0.     | 0.     | 0.     |
| 19 Q25 | 0.     | 0.     | 0.     | 0.     |
| 20 Q30 | 0.     | 0.     | 0.     | 0.     |
| 21 Q31 | 0.     | 0.     | 0.     | 0.     |
| 22 Q32 | 0.     | 0.     | 0.     | 0.     |
| 23 Q33 | 0.     | 0.     | 0.     | 0.     |
| 24 Q34 | 0.     | 0.     | 0.     | 0.     |
| 25 Q35 | 0.     | 0.     | 0.     | 0.     |
| 26 Q36 | 0.     | 0.     | 0.     | 0.     |
| 27 Q37 | 0.     | 0.     | 0.     | 0.     |
| 28 Q38 | 0.     | 0.     | 0.     | 0.     |
| 29 P40 | 0.     | 0.     | 0.     | 0.     |
| 30 P41 | 0.     | 0.     | 0.     | 0.     |
| 31 P42 | 0.     | 0.     | 0.     | 0.     |
| 32 P43 | 0.     | 0.     | 0.     | 0.     |
| 33 P44 | 0.     | 0.     | 0.     | 0.     |
| 34 P45 | 0.     | 0.     | 0.     | 0.     |
| 35 P46 | 0.     | 0.     | 0.     | 0.     |
| 36 P47 | 0.     | 0.     | 0.     | 0.     |
| 37 P48 | 0.     | 0.     | 0.     | 0.     |
| 38 P49 | 0.     | 0.     | 0.     | 0.     |
| 39 P50 | 0.     | 0.     | 0.     | 0.     |
| 40 P51 | 0.     | 0.     | 0.     | 0.     |
| 41 P52 | 0.     | 0.     | 0.     | 0.     |
| 42 P53 | 0.     | 0.     | 0.     | 0.     |
| 43 P54 | 0.     | 0.     | 0.     | 0.     |
| 44 P55 | 0.     | 0.     | 0.     | 0.     |
| 45 P56 | 0.     | 0.     | 0.     | 0.     |
| 46 P57 | 0.     | 0.     | 0.     | 0.     |
| 47 P58 | 0.     | 0.     | 0.     | 0.     |
| 48 P59 | 0.     | 0.     | 0.     | 0.     |
| 49 P60 | 0.     | 0.     | 0.     | 0.     |
| 50 P62 | 0.     | 0.     | 0.     | 0.     |

| (AIJ)  | 53 P67        | 54 P68        | 55 P69 | 56 P72        |
|--------|---------------|---------------|--------|---------------|
| 51 P63 | 0.            | 0.            | 0.     | 0.            |
| 52 P64 | 0.            | 0.            | 0.     | 0.            |
| 53 P67 | 1.9640000E 01 | 0.            | 0.     | 0.            |
| 54 P68 | 0.            | 1.9932000E 01 | 0.     | 0.            |
| 55 P69 | 0.            | 0.            | 0.     | 0.            |
| 56 P72 | 0.            | 0.            | 0.     | 1.6702000E 01 |
| 57 P73 | 0.            | 0.            | 0.     | 0.            |
| 58 P74 | 0.            | 0.            | 0.     | 0.            |
| 59 P77 | 0.            | 0.            | 0.     | 0.            |
| 60 P79 | 0.            | 0.            | 0.     | 0.            |
| 61 P80 | 0.            | 0.            | 0.     | 0.            |
| 62 P81 | 0.            | 0.            | 0.     | 0.            |
| 63 P82 | 0.            | 0.            | 0.     | 0.            |
| 64 P83 | 0.            | 0.            | 0.     | 0.            |
| 65 P84 | 0.            | 0.            | 0.     | 0.            |
| 66 P93 | 0.            | 0.            | 0.     | 0.            |
| 67 P94 | 0.            | 0.            | 0.     | 0.            |
| 68 P95 | 0.            | 0.            | 0.     | 0.            |
| 69 P96 | 0.            | 0.            | 0.     | 0.            |
| 70 P97 | 0.            | 0.            | 0.     | 0.            |
| 71 Q19 | 0.            | 0.            | 0.     | 0.            |
| 72 Q20 | 0.            | 0.            | 0.     | 0.            |
| 73 Q21 | 0.            | 0.            | 0.     | 0.            |
| 74 Q22 | 0.            | 0.            | 0.     | 0.            |
| 75 Q23 | 0.            | 0.            | 0.     | 0.            |
| 76 Q24 | 0.            | 0.            | 0.     | 0.            |
| 77 Q26 | 0.            | 0.            | 0.     | 0.            |
| 78 Q28 | 0.            | 0.            | 0.     | 0.            |

| (A1J)  | 57 P73 | 58 P74 | 59 P77 | 60 P79 |
|--------|--------|--------|--------|--------|
| 1 01   | 0.     | 0.     | 0.     | 0.     |
| 2 02   | 0.     | 0.     | 0.     | 0.     |
| 3 03   | 0.     | 0.     | 0.     | 0.     |
| 4 04   | 0.     | 0.     | 0.     | 0.     |
| 5 05   | 0.     | 0.     | 0.     | 0.     |
| 6 06   | 0.     | 0.     | 0.     | 0.     |
| 7 07   | 0.     | 0.     | 0.     | 0.     |
| 8 08   | 0.     | 0.     | 0.     | 0.     |
| 9 09   | 0.     | 0.     | 0.     | 0.     |
| 10 010 | 0.     | 0.     | 0.     | 0.     |
| 11 011 | 0.     | 0.     | 0.     | 0.     |
| 12 012 | 0.     | 0.     | 0.     | 0.     |
| 13 013 | 0.     | 0.     | 0.     | 0.     |
| 14 014 | 0.     | 0.     | 0.     | 0.     |
| 15 015 | 0.     | 0.     | 0.     | 0.     |
| 16 016 | 0.     | 0.     | 0.     | 0.     |
| 17 017 | 0.     | 0.     | 0.     | 0.     |
| 18 018 | 0.     | 0.     | 0.     | 0.     |
| 19 029 | 0.     | 0.     | 0.     | 0.     |
| 20 030 | 0.     | 0.     | 0.     | 0.     |
| 21 031 | 0.     | 0.     | 0.     | 0.     |
| 22 032 | 0.     | 0.     | 0.     | 0.     |
| 23 033 | 0.     | 0.     | 0.     | 0.     |
| 24 034 | 0.     | 0.     | 0.     | 0.     |
| 25 035 | 0.     | 0.     | 0.     | 0.     |
| 26 036 | 0.     | 0.     | 0.     | 0.     |
| 27 037 | 0.     | 0.     | 0.     | 0.     |
| 28 038 | 0.     | 0.     | 0.     | 0.     |
| 29 P40 | 0.     | 0.     | 0.     | 0.     |
| 30 P41 | 0.     | 0.     | 0.     | 0.     |
| 31 P42 | 0.     | 0.     | 0.     | 0.     |
| 32 P43 | 0.     | 0.     | 0.     | 0.     |
| 33 P44 | 0.     | 0.     | 0.     | 0.     |
| 34 P45 | 0.     | 0.     | 0.     | 0.     |
| 35 P46 | 0.     | 0.     | 0.     | 0.     |
| 36 P47 | 0.     | 0.     | 0.     | 0.     |
| 37 P48 | 0.     | 0.     | 0.     | 0.     |
| 38 P49 | 0.     | 0.     | 0.     | 0.     |
| 39 P50 | 0.     | 0.     | 0.     | 0.     |
| 40 P51 | 0.     | 0.     | 0.     | 0.     |
| 41 P52 | 0.     | 0.     | 0.     | 0.     |
| 42 P53 | 0.     | 0.     | 0.     | 0.     |
| 43 P54 | 0.     | 0.     | 0.     | 0.     |
| 44 P55 | 0.     | 0.     | 0.     | 0.     |
| 45 P56 | 0.     | 0.     | 0.     | 0.     |
| 46 P57 | 0.     | 0.     | 0.     | 0.     |
| 47 P58 | 0.     | 0.     | 0.     | 0.     |
| 48 P59 | 0.     | 0.     | 0.     | 0.     |
| 49 P60 | 0.     | 0.     | 0.     | 0.     |
| 50 P62 | 0.     | 0.     | 0.     | 0.     |

| (AIJ)  | 57 P73        | 58 P74 | 59 P77        | 60 P79        |
|--------|---------------|--------|---------------|---------------|
| 51 P63 | 0.            | 0.     | 0.            | 0.            |
| 52 P64 | 0.            | 0.     | 0.            | 0.            |
| 53 P67 | 0.            | 0.     | 0.            | 0.            |
| 54 P68 | 0.            | 0.     | 0.            | 0.            |
| 55 P69 | 0.            | 0.     | 0.            | 0.            |
| 56 P72 | 0.            | 0.     | 0.            | 0.            |
| 57 P73 | 1.7600000E 01 | 0.     | 0.            | 0.            |
| 58 P74 | 0.            | 0.     | 0.            | 0.            |
| 59 P77 | 0.            | 0.     | 2.6305000E 01 | 1.4262000E 01 |
| 60 P79 | 0.            | 0.     | 1.4262000E 01 | 3.1258000E 01 |
| 61 P80 | 0.            | 0.     | 0.            | 0.            |
| 62 P81 | 0.            | 0.     | 0.            | 0.            |
| 63 P82 | 0.            | 0.     | 0.            | 0.            |
| 64 P83 | 0.            | 0.     | 0.            | 0.            |
| 65 P84 | 0.            | 0.     | 0.            | 0.            |
| 66 P93 | 0.            | 0.     | 0.            | 0.            |
| 67 P94 | 0.            | 0.     | 0.            | 0.            |
| 68 P95 | 0.            | 0.     | 0.            | 0.            |
| 69 P96 | 0.            | 0.     | 0.            | 0.            |
| 70 P97 | 0.            | 0.     | 0.            | 0.            |
| 71 019 | 0.            | 0.     | 0.            | 0.            |
| 72 020 | 0.            | 0.     | 0.            | 0.            |
| 73 021 | 0.            | 0.     | 0.            | 0.            |
| 74 022 | 0.            | 0.     | 0.            | 0.            |
| 75 023 | 0.            | 0.     | 0.            | 0.            |
| 76 024 | 0.            | 0.     | 0.            | 0.            |
| 77 026 | 0.            | 0.     | 0.            | 0.            |
| 78 028 | 0.            | 0.     | 0.            | 0.            |

| (A J)  | 61 P80 | 62 P81 | 63 P82 | 64 P83 |
|--------|--------|--------|--------|--------|
| 1 Q1   | 0.     | 0.     | 0.     | 0.     |
| 2 Q2   | 0.     | 0.     | 0.     | 0.     |
| 3 Q3   | 0.     | 0.     | 0.     | 0.     |
| 4 Q4   | 0.     | 0.     | 0.     | 0.     |
| 5 Q5   | 0.     | 0.     | 0.     | 0.     |
| 6 Q6   | 0.     | 0.     | 0.     | 0.     |
| 7 Q7   | 0.     | 0.     | 0.     | 0.     |
| 8 Q8   | 0.     | 0.     | 0.     | 0.     |
| 9 Q9   | 0.     | 0.     | 0.     | 0.     |
| 10 Q10 | 0.     | 0.     | 0.     | 0.     |
| 11 Q11 | 0.     | 0.     | 0.     | 0.     |
| 12 Q12 | 0.     | 0.     | 0.     | 0.     |
| 13 Q13 | 0.     | 0.     | 0.     | 0.     |
| 14 Q14 | 0.     | 0.     | 0.     | 0.     |
| 15 Q15 | 0.     | 0.     | 0.     | 0.     |
| 16 Q16 | 0.     | 0.     | 0.     | 0.     |
| 17 Q17 | 0.     | 0.     | 0.     | 0.     |
| 18 Q18 | 0.     | 0.     | 0.     | 0.     |
| 19 Q25 | 0.     | 0.     | 0.     | 0.     |
| 20 Q30 | 0.     | 0.     | 0.     | 0.     |
| 21 Q31 | 0.     | 0.     | 0.     | 0.     |
| 22 Q32 | 0.     | 0.     | 0.     | 0.     |
| 23 Q33 | 0.     | 0.     | 0.     | 0.     |
| 24 Q34 | 0.     | 0.     | 0.     | 0.     |
| 25 Q35 | 0.     | 0.     | 0.     | 0.     |
| 26 Q36 | 0.     | 0.     | 0.     | 0.     |
| 27 Q37 | 0.     | 0.     | 0.     | 0.     |
| 28 Q38 | 0.     | 0.     | 0.     | 0.     |
| 29 P40 | 0.     | 0.     | 0.     | 0.     |
| 30 P41 | 0.     | 0.     | 0.     | 0.     |
| 31 P42 | 0.     | 0.     | 0.     | 0.     |
| 32 P43 | 0.     | 0.     | 0.     | 0.     |
| 33 P44 | 0.     | 0.     | 0.     | 0.     |
| 34 P45 | 0.     | 0.     | 0.     | 0.     |
| 35 P46 | 0.     | 0.     | 0.     | 0.     |
| 36 P47 | 0.     | 0.     | 0.     | 0.     |
| 37 P48 | 0.     | 0.     | 0.     | 0.     |
| 38 P49 | 0.     | 0.     | 0.     | 0.     |
| 39 P50 | 0.     | 0.     | 0.     | 0.     |
| 40 P51 | 0.     | 0.     | 0.     | 0.     |
| 41 P52 | 0.     | 0.     | 0.     | 0.     |
| 42 P53 | 0.     | 0.     | 0.     | 0.     |
| 43 P54 | 0.     | 0.     | 0.     | 0.     |
| 44 P55 | 0.     | 0.     | 0.     | 0.     |
| 45 P56 | 0.     | 0.     | 0.     | 0.     |
| 46 P57 | 0.     | 0.     | 0.     | 0.     |
| 47 P58 | 0.     | 0.     | 0.     | 0.     |
| 48 P59 | 0.     | 0.     | 0.     | 0.     |
| 49 P60 | 0.     | 0.     | 0.     | 0.     |
| 50 P62 | 0.     | 0.     | 0.     | 0.     |

| (AIJ)  | 61 P80        | 62 P81 | 63 P82 | 64 P83 |
|--------|---------------|--------|--------|--------|
| 51 P63 | 0.            | 0.     | 0.     | 0.     |
| 52 P64 | 0.            | 0.     | 0.     | 0.     |
| 53 P67 | 0.            | 0.     | 0.     | 0.     |
| 54 P68 | 0.            | 0.     | 0.     | 0.     |
| 55 P69 | 0.            | 0.     | 0.     | 0.     |
| 56 P72 | 0.            | 0.     | 0.     | 0.     |
| 57 P73 | 0.            | 0.     | 0.     | 0.     |
| 58 P74 | 0.            | 0.     | 0.     | 0.     |
| 59 P77 | 0.            | 0.     | 0.     | 0.     |
| 60 P79 | 0.            | 0.     | 0.     | 0.     |
| 61 P80 | 3.2912000E 01 | 0.     | 0.     | 0.     |
| 62 P81 | 0.            | 0.     | 0.     | 0.     |
| 63 P82 | 0.            | 0.     | 0.     | 0.     |
| 64 P83 | 0.            | 0.     | 0.     | 0.     |
| 65 P84 | 0.            | 0.     | 0.     | 0.     |
| 66 P93 | 0.            | 0.     | 0.     | 0.     |
| 67 P94 | 0.            | 0.     | 0.     | 0.     |
| 68 P95 | 0.            | 0.     | 0.     | 0.     |
| 69 P96 | 0.            | 0.     | 0.     | 0.     |
| 70 P97 | 0.            | 0.     | 0.     | 0.     |
| 71 Q19 | 0.            | 0.     | 0.     | 0.     |
| 72 Q20 | 0.            | 0.     | 0.     | 0.     |
| 73 Q21 | 0.            | 0.     | 0.     | 0.     |
| 74 Q22 | 0.            | 0.     | 0.     | 0.     |
| 75 Q23 | 0.            | 0.     | 0.     | 0.     |
| 76 Q24 | 0.            | 0.     | 0.     | 0.     |
| 77 Q26 | 0.            | 0.     | 0.     | 0.     |
| 78 Q28 | 0.            | 0.     | 0.     | 0.     |

| (AIJ)  | 65 P84 | 66 P93 | 67 P94 | 68 P95 |
|--------|--------|--------|--------|--------|
| 1 Q1   | 0.     | 0.     | 0.     | 0.     |
| 2 Q2   | 0.     | 0.     | 0.     | 0.     |
| 3 Q3   | 0.     | 0.     | 0.     | 0.     |
| 4 Q4   | 0.     | 0.     | 0.     | 0.     |
| 5 Q5   | 0.     | 0.     | 0.     | 0.     |
| 6 Q6   | 0.     | 0.     | 0.     | 0.     |
| 7 Q7   | 0.     | 0.     | 0.     | 0.     |
| 8 Q8   | 0.     | 0.     | 0.     | 0.     |
| 9 Q9   | 0.     | 0.     | 0.     | 0.     |
| 10 Q10 | 0.     | 0.     | 0.     | 0.     |
| 11 Q11 | 0.     | 0.     | 0.     | 0.     |
| 12 Q12 | 0.     | 0.     | 0.     | 0.     |
| 13 Q13 | 0.     | 0.     | 0.     | 0.     |
| 14 Q14 | 0.     | 0.     | 0.     | 0.     |
| 15 Q15 | 0.     | 0.     | 0.     | 0.     |
| 16 Q16 | 0.     | 0.     | 0.     | 0.     |
| 17 Q17 | 0.     | 0.     | 0.     | 0.     |
| 18 Q18 | 0.     | 0.     | 0.     | 0.     |
| 19 Q25 | 0.     | 0.     | 0.     | 0.     |
| 20 Q30 | 0.     | 0.     | 0.     | 0.     |
| 21 Q31 | 0.     | 0.     | 0.     | 0.     |
| 22 Q32 | 0.     | 0.     | 0.     | 0.     |
| 23 Q33 | 0.     | 0.     | 0.     | 0.     |
| 24 Q34 | 0.     | 0.     | 0.     | 0.     |
| 25 Q35 | 0.     | 0.     | 0.     | 0.     |
| 26 Q36 | 0.     | 0.     | 0.     | 0.     |
| 27 Q37 | 0.     | 0.     | 0.     | 0.     |
| 28 Q38 | 0.     | 0.     | 0.     | 0.     |
| 29 P40 | 0.     | 0.     | 0.     | 0.     |
| 30 P41 | 0.     | 0.     | 0.     | 0.     |
| 31 P42 | 0.     | 0.     | 0.     | 0.     |
| 32 P43 | 0.     | 0.     | 0.     | 0.     |
| 33 P44 | 0.     | 0.     | 0.     | 0.     |
| 34 P45 | 0.     | 0.     | 0.     | 0.     |
| 35 P46 | 0.     | 0.     | 0.     | 0.     |
| 36 P47 | 0.     | 0.     | 0.     | 0.     |
| 37 P48 | 0.     | 0.     | 0.     | 0.     |
| 38 P49 | 0.     | 0.     | 0.     | 0.     |
| 39 P50 | 0.     | 0.     | 0.     | 0.     |
| 40 P51 | 0.     | 0.     | 0.     | 0.     |
| 41 P52 | 0.     | 0.     | 0.     | 0.     |
| 42 P53 | 0.     | 0.     | 0.     | 0.     |
| 43 P54 | 0.     | 0.     | 0.     | 0.     |
| 44 P55 | 0.     | 0.     | 0.     | 0.     |
| 45 P56 | 0.     | 0.     | 0.     | 0.     |
| 46 P57 | 0.     | 0.     | 0.     | 0.     |
| 47 P58 | 0.     | 0.     | 0.     | 0.     |
| 48 P59 | 0.     | 0.     | 0.     | 0.     |
| 49 P60 | 0.     | 0.     | 0.     | 0.     |
| 50 P62 | 0.     | 0.     | 0.     | 0.     |



| (AIJ)  | 65 P84 | 66 P93        | 67 P94        | 68 P95        |
|--------|--------|---------------|---------------|---------------|
| 51 P63 | 0.     | 0.            | 0.            | 0.            |
| 52 P64 | 0.     | 0.            | 0.            | 0.            |
| 53 P67 | 0.     | 0.            | 0.            | 0.            |
| 54 P68 | 0.     | 0.            | 0.            | 0.            |
| 55 P69 | 0.     | 0.            | 0.            | 0.            |
| 56 P72 | 0.     | 0.            | 0.            | 0.            |
| 57 P73 | 0.     | 0.            | 0.            | 0.            |
| 58 P74 | 0.     | 0.            | 0.            | 0.            |
| 59 P77 | 0.     | 0.            | 0.            | 0.            |
| 60 P79 | 0.     | 0.            | 0.            | 0.            |
| 61 P80 | 0.     | 0.            | 0.            | 0.            |
| 62 P81 | 0.     | 0.            | 0.            | 0.            |
| 63 P82 | 0.     | 0.            | 0.            | 0.            |
| 64 P83 | 0.     | 0.            | 0.            | 0.            |
| 65 P84 | 0.     | 0.            | 0.            | 0.            |
| 66 P93 | 0.     | 2.4476000E 02 | 6.1190000E 01 | 0.            |
| 67 P94 | 0.     | 6.1190000E 01 | 2.4476600E 02 | 6.1192999E 01 |
| 68 P95 | 0.     | 0.            | 6.1192999E 01 | 2.4476600E 02 |
| 69 P96 | 0.     | 0.            | 0.            | 0.            |
| 70 P97 | 0.     | 0.            | 0.            | 0.            |
| 71 Q19 | 0.     | 0.            | 0.            | 0.            |
| 72 Q20 | 0.     | 0.            | 0.            | 0.            |
| 73 Q21 | 0.     | 0.            | 0.            | 0.            |
| 74 Q22 | 0.     | 0.            | 0.            | 0.            |
| 75 Q23 | 0.     | 0.            | 0.            | 0.            |
| 76 Q24 | 0.     | 0.            | 0.            | 0.            |
| 77 Q26 | 0.     | 0.            | 0.            | 0.            |
| 78 Q28 | 0.     | 0.            | 0.            | 0.            |

| (AIJ)  | 69 P96 | 70 P97 | 71 Q19 | 72 Q20 |
|--------|--------|--------|--------|--------|
| 1 Q1   | 0.     | 0.     | 0.     | 0.     |
| 2 Q2   | 0.     | 0.     | 0.     | 0.     |
| 3 Q3   | 0.     | 0.     | 0.     | 0.     |
| 4 Q4   | 0.     | 0.     | 0.     | 0.     |
| 5 Q5   | 0.     | 0.     | 0.     | 0.     |
| 6 Q6   | 0.     | 0.     | 0.     | 0.     |
| 7 Q7   | 0.     | 0.     | 0.     | 0.     |
| 8 Q8   | 0.     | 0.     | 0.     | 0.     |
| 9 Q9   | 0.     | 0.     | 0.     | 0.     |
| 10 Q10 | 0.     | 0.     | 0.     | 0.     |
| 11 Q11 | 0.     | 0.     | 0.     | 0.     |
| 12 Q12 | 0.     | 0.     | 0.     | 0.     |
| 13 Q13 | 0.     | 0.     | 0.     | 0.     |
| 14 Q14 | 0.     | 0.     | 0.     | 0.     |
| 15 Q15 | 0.     | 0.     | 0.     | 0.     |
| 16 Q16 | 0.     | 0.     | 0.     | 0.     |
| 17 Q17 | 0.     | 0.     | 0.     | 0.     |
| 18 Q18 | 0.     | 0.     | 0.     | 0.     |
| 19 Q25 | 0.     | 0.     | 0.     | 0.     |
| 20 Q30 | 0.     | 0.     | 0.     | 0.     |
| 21 Q31 | 0.     | 0.     | 0.     | 0.     |
| 22 Q32 | 0.     | 0.     | 0.     | 0.     |
| 23 Q33 | 0.     | 0.     | 0.     | 0.     |
| 24 Q34 | 0.     | 0.     | 0.     | 0.     |
| 25 Q35 | 0.     | 0.     | 0.     | 0.     |
| 26 Q36 | 0.     | 0.     | 0.     | 0.     |
| 27 Q37 | 0.     | 0.     | 0.     | 0.     |
| 28 Q38 | 0.     | 0.     | 0.     | 0.     |
| 29 P40 | 0.     | 0.     | 0.     | 0.     |
| 30 P41 | 0.     | 0.     | 0.     | 0.     |
| 31 P42 | 0.     | 0.     | 0.     | 0.     |
| 32 P43 | 0.     | 0.     | 0.     | 0.     |
| 33 P44 | 0.     | 0.     | 0.     | 0.     |
| 34 P45 | 0.     | 0.     | 0.     | 0.     |
| 35 P46 | 0.     | 0.     | 0.     | 0.     |
| 36 P47 | 0.     | 0.     | 0.     | 0.     |
| 37 P48 | 0.     | 0.     | 0.     | 0.     |
| 38 P49 | 0.     | 0.     | 0.     | 0.     |
| 39 P50 | 0.     | 0.     | 0.     | 0.     |
| 40 P51 | 0.     | 0.     | 0.     | 0.     |
| 41 P52 | 0.     | 0.     | 0.     | 0.     |
| 42 P53 | 0.     | 0.     | 0.     | 0.     |
| 43 P54 | 0.     | 0.     | 0.     | 0.     |
| 44 P55 | 0.     | 0.     | 0.     | 0.     |
| 45 P56 | 0.     | 0.     | 0.     | 0.     |
| 46 P57 | 0.     | 0.     | 0.     | 0.     |
| 47 P58 | 0.     | 0.     | 0.     | 0.     |
| 48 P59 | 0.     | 0.     | 0.     | 0.     |
| 49 P60 | 0.     | 0.     | 0.     | 0.     |
| 50 P62 | 0.     | 0.     | 0.     | 0.     |

| (A1J)  | 69 P96 | 70 P97 | 71 Q19        | 72 Q20        |
|--------|--------|--------|---------------|---------------|
| 51 P63 | 0.     | 0.     | 0.            | 0.            |
| 52 P64 | 0.     | 0.     | 0.            | 0.            |
| 53 P67 | 0.     | 0.     | 0.            | 0.            |
| 54 P68 | 0.     | 0.     | 0.            | 0.            |
| 55 P69 | 0.     | 0.     | 0.            | 0.            |
| 56 P72 | 0.     | 0.     | 0.            | 0.            |
| 57 P73 | 0.     | 0.     | 0.            | 0.            |
| 58 P74 | 0.     | 0.     | 0.            | 0.            |
| 59 P77 | 0.     | 0.     | 0.            | 0.            |
| 60 P79 | 0.     | 0.     | 0.            | 0.            |
| 61 P80 | 0.     | 0.     | 0.            | 0.            |
| 62 P81 | 0.     | 0.     | 0.            | 0.            |
| 63 P82 | 0.     | 0.     | 0.            | 0.            |
| 64 P83 | 0.     | 0.     | 0.            | 0.            |
| 65 P84 | 0.     | 0.     | 0.            | 0.            |
| 66 P93 | 0.     | 0.     | 0.            | 0.            |
| 67 P94 | 0.     | 0.     | 0.            | 0.            |
| 68 P95 | 0.     | 0.     | 0.            | 0.            |
| 69 P96 | 0.     | 0.     | 0.            | 0.            |
| 70 P97 | 0.     | 0.     | 0.            | 0.            |
| 71 Q19 | 0.     | 0.     | 3.7486533E 04 | 0.            |
| 72 Q20 | 0.     | 0.     | 0.            | 3.5614092E 04 |
| 73 Q21 | 0.     | 0.     | 0.            | 0.            |
| 74 Q22 | 0.     | 0.     | 0.            | 0.            |
| 75 Q23 | 0.     | 0.     | 0.            | 0.            |
| 76 Q24 | 0.     | 0.     | 0.            | 0.            |
| 77 Q26 | 0.     | 0.     | 0.            | 0.            |
| 78 Q28 | 0.     | 0.     | 0.            | 0.            |

| (AIJ)  | 73 Q21 | 74 Q22 | 75 Q23 | 76 Q24 |
|--------|--------|--------|--------|--------|
| 1 Q1   | 0.     | 0.     | 0.     | 0.     |
| 2 Q2   | 0.     | 0.     | 0.     | 0.     |
| 3 Q3   | 0.     | 0.     | 0.     | 0.     |
| 4 Q4   | 0.     | 0.     | 0.     | 0.     |
| 5 Q5   | 0.     | 0.     | 0.     | 0.     |
| 6 Q6   | 0.     | 0.     | 0.     | 0.     |
| 7 Q7   | 0.     | 0.     | 0.     | 0.     |
| 8 Q8   | 0.     | 0.     | 0.     | 0.     |
| 9 Q9   | 0.     | 0.     | 0.     | 0.     |
| 10 Q10 | 0.     | 0.     | 0.     | 0.     |
| 11 Q11 | 0.     | 0.     | 0.     | 0.     |
| 12 Q12 | 0.     | 0.     | 0.     | 0.     |
| 13 Q13 | 0.     | 0.     | 0.     | 0.     |
| 14 Q14 | 0.     | 0.     | 0.     | 0.     |
| 15 Q15 | 0.     | 0.     | 0.     | 0.     |
| 16 Q16 | 0.     | 0.     | 0.     | 0.     |
| 17 Q17 | 0.     | 0.     | 0.     | 0.     |
| 18 Q18 | 0.     | 0.     | 0.     | 0.     |
| 19 Q25 | 0.     | 0.     | 0.     | 0.     |
| 20 Q30 | 0.     | 0.     | 0.     | 0.     |
| 21 Q31 | 0.     | 0.     | 0.     | 0.     |
| 22 Q32 | 0.     | 0.     | 0.     | 0.     |
| 23 Q33 | 0.     | 0.     | 0.     | 0.     |
| 24 Q34 | 0.     | 0.     | 0.     | 0.     |
| 25 Q35 | 0.     | 0.     | 0.     | 0.     |
| 26 Q36 | 0.     | 0.     | 0.     | 0.     |
| 27 Q37 | 0.     | 0.     | 0.     | 0.     |
| 28 Q38 | 0.     | 0.     | 0.     | 0.     |
| 29 P40 | 0.     | 0.     | 0.     | 0.     |
| 30 P41 | 0.     | 0.     | 0.     | 0.     |
| 31 P42 | 0.     | 0.     | 0.     | 0.     |
| 32 P43 | 0.     | 0.     | 0.     | 0.     |
| 33 P44 | 0.     | 0.     | 0.     | 0.     |
| 34 P45 | 0.     | 0.     | 0.     | 0.     |
| 35 P46 | 0.     | 0.     | 0.     | 0.     |
| 36 P47 | 0.     | 0.     | 0.     | 0.     |
| 37 P48 | 0.     | 0.     | 0.     | 0.     |
| 38 P49 | 0.     | 0.     | 0.     | 0.     |
| 39 P50 | 0.     | 0.     | 0.     | 0.     |
| 40 P51 | 0.     | 0.     | 0.     | 0.     |
| 41 P52 | 0.     | 0.     | 0.     | 0.     |
| 42 P53 | 0.     | 0.     | 0.     | 0.     |
| 43 P54 | 0.     | 0.     | 0.     | 0.     |
| 44 P55 | 0.     | 0.     | 0.     | 0.     |
| 45 P56 | 0.     | 0.     | 0.     | 0.     |
| 46 P57 | 0.     | 0.     | 0.     | 0.     |
| 47 P58 | 0.     | 0.     | 0.     | 0.     |
| 48 P59 | 0.     | 0.     | 0.     | 0.     |
| 49 P60 | 0.     | 0.     | 0.     | 0.     |
| 50 P62 | 0.     | 0.     | 0.     | 0.     |

| (AIJ)  | 73 Q21        | 74 Q22        | 75 Q23        | 76 Q24        |
|--------|---------------|---------------|---------------|---------------|
| 51 P63 | 0.            | 0.            | 0.            | 0.            |
| 52 P64 | 0.            | 0.            | 0.            | 0.            |
| 53 P67 | 0.            | 0.            | 0.            | 0.            |
| 54 P68 | 0.            | 0.            | 0.            | 0.            |
| 55 P69 | 0.            | 0.            | 0.            | 0.            |
| 56 P72 | 0.            | 0.            | 0.            | 0.            |
| 57 P73 | 0.            | 0.            | 0.            | 0.            |
| 58 P74 | 0.            | 0.            | 0.            | 0.            |
| 59 P77 | 0.            | 0.            | 0.            | 0.            |
| 60 P79 | 0.            | 0.            | 0.            | 0.            |
| 61 P80 | 0.            | 0.            | 0.            | 0.            |
| 62 P81 | 0.            | 0.            | 0.            | 0.            |
| 63 P82 | 0.            | 0.            | 0.            | 0.            |
| 64 P83 | 0.            | 0.            | 0.            | 0.            |
| 65 P84 | 0.            | 0.            | 0.            | 0.            |
| 66 P93 | 0.            | 0.            | 0.            | 0.            |
| 67 P94 | 0.            | 0.            | 0.            | 0.            |
| 68 P95 | 0.            | 0.            | 0.            | 0.            |
| 69 P96 | 0.            | 0.            | 0.            | 0.            |
| 70 P97 | 0.            | 0.            | 0.            | 0.            |
| 71 Q19 | 0.            | 0.            | 0.            | 0.            |
| 72 Q20 | 0.            | 0.            | 0.            | 0.            |
| 73 Q21 | 4.1775324E 04 | 0.            | 0.            | 0.            |
| 74 Q22 | 0.            | 4.0748493E 04 | 0.            | 0.            |
| 75 Q23 | 0.            | 0.            | 4.4131989E 04 | 0.            |
| 76 Q24 | 0.            | 0.            | 0.            | 4.3784739E 04 |
| 77 Q26 | 0.            | 0.            | 0.            | 0.            |
| 78 Q28 | 0.            | 0.            | 0.            | 0.            |

| (A1J)  | 77 Q26 | 78 Q28 |
|--------|--------|--------|
| 1 Q1   | 0.     | 0.     |
| 2 Q2   | 0.     | 0.     |
| 3 Q3   | 0.     | 0.     |
| 4 Q4   | 0.     | 0.     |
| 5 Q5   | 0.     | 0.     |
| 6 Q6   | 0.     | 0.     |
| 7 Q7   | 0.     | 0.     |
| 8 Q8   | 0.     | 0.     |
| 9 Q9   | 0.     | 0.     |
| 10 Q10 | 0.     | 0.     |
| 11 Q11 | 0.     | 0.     |
| 12 Q12 | 0.     | 0.     |
| 13 Q13 | 0.     | 0.     |
| 14 Q14 | 0.     | 0.     |
| 15 Q15 | 0.     | 0.     |
| 16 Q16 | 0.     | 0.     |
| 17 Q17 | 0.     | 0.     |
| 18 Q18 | 0.     | 0.     |
| 19 Q25 | 0.     | 0.     |
| 20 Q30 | 0.     | 0.     |
| 21 Q31 | 0.     | 0.     |
| 22 Q32 | 0.     | 0.     |
| 23 Q33 | 0.     | 0.     |
| 24 Q34 | 0.     | 0.     |
| 25 Q35 | 0.     | 0.     |
| 26 Q36 | 0.     | 0.     |
| 27 Q37 | 0.     | 0.     |
| 28 Q38 | 0.     | 0.     |
| 29 P40 | 0.     | 0.     |
| 30 P41 | 0.     | 0.     |
| 31 P42 | 0.     | 0.     |
| 32 P43 | 0.     | 0.     |
| 33 P44 | 0.     | 0.     |
| 34 P45 | 0.     | 0.     |
| 35 P46 | 0.     | 0.     |
| 36 P47 | 0.     | 0.     |
| 37 P48 | 0.     | 0.     |
| 38 P49 | 0.     | 0.     |
| 39 P50 | 0.     | 0.     |
| 40 P51 | 0.     | 0.     |
| 41 P52 | 0.     | 0.     |
| 42 P53 | 0.     | 0.     |
| 43 P54 | 0.     | 0.     |
| 44 P55 | 0.     | 0.     |
| 45 P56 | 0.     | 0.     |
| 46 P57 | 0.     | 0.     |
| 47 P58 | 0.     | 0.     |
| 48 P59 | 0.     | 0.     |
| 49 P60 | 0.     | 0.     |
| 50 P62 | 0.     | 0.     |

| (41J)  | 77 Q26        | 78 Q28        |
|--------|---------------|---------------|
| 51 P63 | 0.            | 0.            |
| 52 P64 | 0.            | 0.            |
| 53 P67 | 0.            | 0.            |
| 54 P68 | 0.            | 0.            |
| 55 P69 | 0.            | 0.            |
| 56 P72 | 0.            | 0.            |
| 57 P73 | 0.            | 0.            |
| 58 P74 | 0.            | 0.            |
| 59 P77 | 0.            | 0.            |
| 60 P79 | 0.            | 0.            |
| 61 P80 | 0.            | 0.            |
| 62 P81 | 0.            | 0.            |
| 63 P82 | 0.            | 0.            |
| 64 P83 | 0.            | 0.            |
| 65 P84 | 0.            | 0.            |
| 66 P93 | 0.            | 0.            |
| 67 P94 | 0.            | 0.            |
| 68 P95 | 0.            | 0.            |
| 69 P96 | 0.            | 0.            |
| 70 P97 | 0.            | 0.            |
| 71 Q19 | 0.            | 0.            |
| 72 Q20 | 0.            | 0.            |
| 73 Q21 | 0.            | 0.            |
| 74 Q22 | 0.            | 0.            |
| 75 Q23 | 0.            | 0.            |
| 76 Q24 | 0.            | 0.            |
| 77 Q26 | 4.5653970E 04 | 0.            |
| 78 Q28 | 0.            | 3.9997108E 04 |

INTERNAL LOADS IN STATIC STRUCTURE  
CONFIGURATION 5, SYMMETRIC

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| GIRGIN | Q19            | Q20            | Q21            | Q22            |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 1.6578466E-01  | -1.5314410E-01 | 0.             | 0.             |
| 2 Q2   | 3.8260172E-01  | 2.8390509E-01  | -5.9669456E-01 | -9.6193105E-01 |
| 3 Q3   | 2.9253459E-01  | 2.1707183E-01  | -1.4350565E-01 | -2.0158783E-01 |
| 4 Q4   | 7.6423032E-01  | -3.6195229E-01 | 4.2002466E-01  | -6.9243792E-01 |
| 5 Q5   | 2.8422857E-01  | 7.6547986E-02  | -2.6501062E-02 | -2.2104953E-01 |
| 6 Q6   | 2.8422856E-01  | 7.6547990E-02  | -2.6501067E-02 | -2.2104950E-01 |
| 7 Q7   | 2.8422855E-01  | 7.6547986E-02  | -2.6501058E-02 | -2.2104950E-01 |
| 8 Q8   | 2.8422857E-01  | 7.6547979E-02  | -2.6501061E-02 | -2.2104953E-01 |
| 9 Q9   | -2.1745782E-08 | 1.3929769E-08  | -1.0319076E-08 | 2.9475705E-08  |
| 10 Q10 | -1.5717070E-01 | 1.4518692E-01  | 0.             | 0.             |
| 11 Q11 | 3.2376425E-01  | 3.5921518E-01  | -1.0023296E 00 | -6.1475936E-01 |
| 12 Q12 | 2.4679273E-01  | 2.7381562E-01  | -1.9583662E-01 | -1.5313634E-01 |
| 13 Q13 | 1.2189699E 00  | -8.0891752E-01 | 8.7033695E-01  | -1.1452023E 00 |
| 14 Q14 | 2.8917629E-01  | 7.8548898E-02  | -2.6413805E-02 | -2.2584637E-01 |
| 15 Q15 | 2.8917634E-01  | 7.8548877E-02  | -2.6413805E-02 | -2.2584644E-01 |
| 16 Q16 | 7.3321049E-01  | -8.5914918E-02 | -1.0154045E-01 | -8.8945872E-01 |
| 17 Q17 | 7.3321052E-01  | -8.5914927E-02 | -1.0154047E-01 | -8.8945878E-01 |
| 18 Q18 | -8.0131847E-09 | 1.6534530E-09  | 1.1963644E-09  | 1.0514868E-08  |
| 19 Q25 | -1.0000000E 00 | 1.0000000E 00  | -1.0000000E 00 | 1.0000000E 00  |
| 20 Q30 | -4.4420812E-01 | 1.6452824E-01  | 7.5156088E-02  | 6.6387228E-01  |
| 21 Q31 | 3.8259883E-01  | 2.2089211E-01  | -8.7446855E-01 | -5.3633831E-01 |
| 22 Q32 | 2.3298753E-01  | 3.5356275E-01  | -5.3251672E-01 | -8.5846994E-01 |
| 23 Q33 | 0.             | 0.             | 4.6382567E-01  | 2.5752093E-01  |
| 24 Q34 | 0.             | 0.             | 2.6079375E-01  | 4.4524172E-01  |
| 25 Q35 | 7.9598827E-01  | -7.9598827E-01 | 7.9598827E-01  | -7.9598827E-01 |
| 26 Q36 | 4.2287092E-01  | -4.2287092E-01 | 4.2287092E-01  | -4.2287092E-01 |
| 27 Q37 | -7.6848919E-01 | 6.8545834E-01  | -4.9799277E-01 | 9.4522052E-01  |
| 28 Q38 | -3.9236805E-01 | 3.4997492E-01  | -2.5426050E-01 | 4.8260189E-01  |
| 29 P40 | 2.8455113E 00  | -1.9792450E 01 | 0.             | 0.             |
| 30 P41 | 9.4124468E 00  | -1.4919531E 01 | -1.0241606E 01 | -3.3674388E 01 |
| 31 P42 | 1.4433776E 01  | -1.1193515E 01 | -1.2704866E 01 | -3.7134624E 01 |
| 32 P43 | 2.7550949E 01  | -1.7406028E 01 | -5.4956048E 00 | -4.9019558E 01 |
| 33 P44 | 2.7537174E 01  | -1.7397325E 01 | -5.4928572E 00 | -4.8995049E 01 |
| 34 P45 | 3.3132780E 01  | -1.5890324E 01 | -6.0145828E 00 | -5.3346851E 01 |
| 35 P46 | 3.8728673E 01  | -1.4383249E 01 | -6.5363348E 00 | -5.7698874E 01 |
| 36 P47 | 4.3986902E 01  | -1.2967111E 01 | -7.0266051E 00 | -6.1788291E 01 |
| 37 P48 | 4.9245129E 01  | -1.1550972E 01 | -7.5168756E 00 | -6.5877705E 01 |
| 38 P49 | 4.9245129E 01  | -1.1550972E 01 | -7.5168756E 00 | -6.5877705E 01 |
| 39 P50 | 2.4736664E 01  | -3.1036391E 00 | 0.             | 0.             |
| 40 P51 | 1.7815605E 01  | -1.0782528E 01 | 4.2803499E 01  | 1.3141619E 01  |
| 41 P52 | 1.2539447E 01  | -1.6636405E 01 | 4.6990268E 01  | 1.6415505E 01  |
| 42 P53 | -3.4895139E 01 | 2.2032554E 01  | 7.0083579E 00  | 6.2273173E 01  |
| 43 P54 | -2.9384994E 01 | 1.8553486E 01  | 5.9016972E 00  | 5.2439878E 01  |
| 44 P55 | -3.5357988E 01 | 1.6931042E 01  | 6.4472799E 00  | 5.7104778E 01  |
| 45 P56 | -4.1331301E 01 | 1.5308514E 01  | 6.9928918E 00  | 6.1769933E 01  |
| 46 P57 | -3.9342864E 01 | 1.4590544E 01  | 6.6649251E 00  | 5.8872923E 01  |
| 47 P58 | -4.4739406E 01 | 1.3136198E 01  | 7.1530361E 00  | 6.3046272E 01  |
| 48 P59 | -5.0085952E 01 | 1.1681852E 01  | 7.6411471E 00  | 6.7219622E 01  |
| 49 P60 | -5.0085952E 01 | 1.1681852E 01  | 7.6411471E 00  | 6.7219622E 01  |
| 50 P62 | -3.6667703E 00 | 3.6014471E 00  | 8.3807768E 00  | -8.7445133E 00 |



| GIRGIN | 019            | 020            | 021            | 022            |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | -3.6660356E 00 | 3.6007254E 00  | 8.3790971E 00  | -8.7427609E 00 |
| 52 P64 | 4.7553349E-01  | -4.6706191E-01 | -1.0868802E 00 | 1.1340522E 00  |
| 53 P67 | 0.             | 0.             | -5.8039286E 00 | 5.8298619E 00  |
| 54 P68 | 0.             | 0.             | -5.8027655E 00 | 5.8286936E 00  |
| 55 P69 | 0.             | 0.             | 7.5269578E-01  | -7.5605897E-01 |
| 56 P72 | -1.2166828E 01 | 1.2166828E 01  | -1.2166828E 01 | 1.2166828E 01  |
| 57 P73 | -1.2164390E 01 | 1.2164390E 01  | -1.2164390E 01 | 1.2164390E 01  |
| 58 P74 | 1.5778830E 00  | -1.5778830E 00 | 1.5778830E 00  | -1.5778830E 00 |
| 59 P77 | 1.1935594E 01  | -7.5360531E 00 | -2.3971509E 00 | -2.1300025E 01 |
| 60 P79 | 1.3763498E 01  | -1.2276431E 01 | 8.9189570E 00  | -1.6928723E 01 |
| 61 P80 | 1.3760740E 01  | -1.2273971E 01 | 8.9171697E 00  | -1.6925331E 01 |
| 62 P81 | -1.7849508E 00 | 1.5920971E 00  | -1.1566754E 00 | 2.1954403E 00  |
| 63 P82 | -8.3754883E-01 | 5.2914326E-01  | 1.6706639E-01  | 1.4901946E 00  |
| 64 P83 | 0.             | 0.             | 0.             | 0.             |
| 65 P84 | 0.             | 0.             | 0.             | 0.             |
| 66 P93 | -1.8356860E 01 | 1.8356860E 01  | 0.             | 0.             |
| 67 P94 | -1.8356860E 01 | 1.8356860E 01  | -1.8356860E 01 | 1.8356860E 01  |
| 68 P95 | -1.8356860E 01 | 1.8356860E 01  | -1.8356860E 01 | 1.8356860E 01  |
| 69 P96 | -2.8138631E 00 | -7.5782490E-01 | 2.6236043E-01  | 2.1883905E 00  |
| 70 P97 | 7.1121426E 00  | -8.3337498E-01 | -9.8494265E-01 | -8.6277509E 00 |
| 71 019 | 1.0000000E 00  | 0.             | 0.             | 0.             |
| 72 020 | 0.             | 1.0000000E 00  | 0.             | 0.             |
| 73 021 | 0.             | 0.             | 1.0000000E 00  | 0.             |
| 74 022 | 0.             | 0.             | 0.             | 1.0000000E 00  |
| 75 023 | 0.             | 0.             | 0.             | 0.             |
| 76 024 | 0.             | 0.             | 0.             | 0.             |
| 77 026 | 0.             | 0.             | 0.             | 0.             |
| 78 028 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | Q23            | Q24            | Q26            | Q28            |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 0.             | 0.             | 0.             | 0.             |
| 2 Q2   | 1.3291547E-08  | -2.9278967E-08 | -5.5219507E-08 | 5.9847847E-09  |
| 3 Q3   | -5.5206299E-01 | -9.7599276E-01 | -1.8286536E-08 | 3.6747974E-09  |
| 4 Q4   | 4.4171894E-01  | -6.7406361E-01 | -1.5258652E 00 | -6.6194833E-10 |
| 5 Q5   | -7.5120440E-03 | -2.0436351E-01 | -1.8712132E-01 | -2.0502557E-01 |
| 6 Q6   | -7.5120458E-03 | -2.0436349E-01 | -1.8712129E-01 | -2.0502557E-01 |
| 7 Q7   | -7.5120473E-03 | -2.0436348E-01 | -1.8712129E-01 | -2.0502557E-01 |
| 8 Q8   | -7.5120451E-03 | -2.0436352E-01 | -1.8712132E-01 | -2.0502558E-01 |
| 9 Q9   | -8.1180407E-09 | 2.8894098E-08  | 1.5069707E-08  | 1.5361558E-09  |
| 10 Q10 | 0.             | 0.             | 0.             | 0.             |
| 11 Q11 | 1.0890851E-08  | -1.4487607E-08 | -4.4651842E-09 | -1.6539637E-08 |
| 12 Q12 | -1.0030674E 00 | -5.7669634E-01 | 4.0828947E-09  | -8.2698182E-09 |
| 13 Q13 | 8.9581444E-01  | -1.1260742E 00 | -1.5806720E 00 | -1.7266226E-08 |
| 14 Q14 | -3.2395935E-03 | -2.0827696E-01 | -1.9580347E-01 | -1.2091746E 00 |
| 15 Q15 | -3.2396019E-03 | -2.0827702E-01 | -1.9580352E-01 | -1.2091747E 00 |
| 16 Q16 | -2.5445603E-02 | -8.2343447E-01 | -7.8179029E-01 | -8.2200459E-01 |
| 17 Q17 | -2.5445618E-02 | -8.2343451E-01 | -7.8179032E-01 | -8.2200462E-01 |
| 18 Q18 | 3.2128028E-10  | 9.7394676E-09  | 9.2592353E-09  | -7.7768574E-10 |
| 19 Q25 | -1.0000567E 00 | 1.0000567E 00  | 1.0000000E 00  | 4.5250987E-09  |
| 20 Q30 | 2.2214646E-02  | 6.1539847E-01  | 5.8621634E-01  | 6.1309074E-01  |
| 21 Q31 | 0.             | 0.             | 0.             | 0.             |
| 22 Q32 | 0.             | 0.             | 0.             | 0.             |
| 23 Q33 | -8.1881174E-01 | -4.7076145E-01 | 0.             | 0.             |
| 24 Q34 | -4.6039036E-01 | -8.1392465E-01 | 0.             | 0.             |
| 25 Q35 | 1.3097328E 00  | -5.2194790E-01 | -1.2280049E 00 | -6.1536778E-09 |
| 26 Q36 | 6.9579912E-01  | 7.6417953E-02  | -1.2098934E 00 | -2.8976102E-09 |
| 27 Q37 | -5.2844529E-01 | 9.1624115E-01  | 1.1822938E 00  | -2.7703553E-01 |
| 28 Q38 | -2.6980866E-01 | 4.6780586E-01  | 9.9643958E-01  | -1.4144622E-01 |
| 29 P40 | 0.             | 0.             | 0.             | 0.             |
| 30 P41 | -8.4415210E-08 | -6.0824524E-07 | -4.7330048E-07 | 2.1836960E-08  |
| 31 P42 | -9.4761051E 00 | -3.3917719E 01 | -1.9692265E-06 | 4.3673915E-08  |
| 32 P43 | -1.8944856E 00 | -4.5487279E 01 | -4.3353698E 01 | 9.8544689E-08  |
| 33 P44 | -1.8435384E 00 | -4.5464535E 01 | -4.3332021E 01 | -1.9017459E-08 |
| 34 P45 | -2.0414283E 00 | -4.9487841E 01 | -4.7015879E 01 | -4.0363383E 00 |
| 35 P46 | -2.1893256E 00 | -5.3511350E 01 | -5.0699924E 01 | -8.0728817E 00 |
| 36 P47 | -2.3282973E 00 | -5.7292075E 01 | -5.4161668E 01 | -1.1865855E 01 |
| 37 P48 | -2.4672707E 00 | -6.1072800E 01 | -5.7623408E 01 | -1.5658828E 01 |
| 38 P49 | -2.4672710E 00 | -6.1072800E 01 | -5.7623410E 01 | -1.5658829E 01 |
| 39 P50 | 0.             | 0.             | 0.             | 0.             |
| 40 P51 | -2.0506754E-07 | -8.9982709E-08 | -1.9597895E-07 | 5.2926876E-07  |
| 41 P52 | 4.2823377E 01  | 1.2329134E 01  | 1.4288589E-07  | 5.2926836E-07  |
| 42 P53 | 2.2956247E 00  | 5.7779112E 01  | 5.5166638E 01  | 9.3628745E-07  |
| 43 P54 | 1.9331372E 00  | 4.8655455E 01  | 4.6455505E 01  | 9.5559130E-07  |
| 44 P55 | 2.0000467E 00  | 5.2957456E 01  | 5.0499864E 01  | 4.3205460E 00  |
| 45 P56 | 2.0669641E 00  | 5.7259691E 01  | 5.4544447E 01  | 8.6413198E 00  |
| 46 P57 | 1.9700236E 00  | 5.4574711E 01  | 5.1986308E 01  | 8.2360418E 00  |
| 47 P58 | 2.0297956E 00  | 5.8422878E 01  | 5.5604427E 01  | 1.2100948E 01  |
| 48 P59 | 2.0875677E 00  | 6.2271545E 01  | 5.9222546E 01  | 1.5965854E 01  |
| 49 P60 | 2.0845677E 00  | 6.2271545E 01  | 5.9222546E 01  | 1.5965854E 01  |
| 50 P62 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | Q23            | Q24            | Q26            | Q28            |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 0.             | 0.             | 0.             | 0.             |
| 52 P64 | 0.             | 0.             | 0.             | 0.             |
| 53 P67 | 1.0245923E 01  | -1.0657286E 01 | 0.             | 0.             |
| 54 P68 | 1.0243870E 01  | -1.0655151E 01 | 0.             | 0.             |
| 55 P69 | -1.3287660E 00 | 1.3821145E 00  | 0.             | 0.             |
| 56 P72 | -2.0019509E 01 | 2.0056465E 01  | -2.6781869E-01 | 8.3369937E-08  |
| 57 P73 | -2.0015497E 01 | 2.0052446E 01  | -2.6776493E-01 | 8.3353231E-08  |
| 58 P74 | 2.5962758E 00  | -2.6010686E 00 | 3.4732655E-02  | -1.0812022E-08 |
| 59 P77 | -7.8519939E-01 | -1.9762868E 01 | -1.8869293E 01 | 1.4679230E 01  |
| 60 P79 | 9.4643562E 00  | -1.6409708E 01 | -6.1821718E 00 | 4.9616545E 00  |
| 61 P80 | 9.4624597E 00  | -1.6406419E 01 | -6.1809330E 00 | 4.9606603E 00  |
| 62 P81 | -1.2274067E 00 | 2.1281306E 00  | 8.0174911E-01  | -6.4346353E-01 |
| 63 P82 | 5.7592356E-02  | 1.3828133E 00  | 1.3179524E 00  | -8.2698182E-09 |
| 64 P83 | 0.             | 0.             | 0.             | 0.             |
| 65 P84 | 0.             | 0.             | 0.             | 0.             |
| 66 P93 | 0.             | 0.             | 0.             | 0.             |
| 67 P94 | 0.             | 0.             | 0.             | 0.             |
| 68 P95 | -1.8357900E 01 | 1.8357900E 01  | 0.             | 0.             |
| 69 P96 | 7.4369145E-02  | 2.0231991E 00  | 1.8525010E 00  | 2.0297532E 00  |
| 70 P97 | -2.4682242E-01 | -7.9873156E 00 | -7.5833669E 00 | -7.9734448E 00 |
| 71 Q19 | 0.             | 0.             | 0.             | 0.             |
| 72 Q20 | 0.             | 0.             | 0.             | 0.             |
| 73 Q21 | 0.             | 0.             | 0.             | 0.             |
| 74 Q22 | 0.             | 0.             | 0.             | 0.             |
| 75 Q23 | 1.0000000E 00  | 0.             | 0.             | 0.             |
| 76 Q24 | 0.             | 1.0000000E 00  | 0.             | 0.             |
| 77 Q26 | 0.             | 0.             | 1.0000000E 00  | 0.             |
| 78 Q28 | 0.             | 0.             | 0.             | 1.0000000E 00  |

| GIRGIM | P100           | P101           | P102           | P103           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | -1.1734664E-07 | -7.6702443E-02 | -1.4767473E-01 | 0.             |
| 2 Q2   | -8.1025062E-08 | -5.6229746E-02 | -1.0825878E-01 | 9.2197963E-10  |
| 3 Q3   | -6.1932949E-08 | -4.2992870E-02 | -8.2773902E-02 | 5.6611698E-10  |
| 4 Q4   | -5.1222742E-08 | -3.3938130E-02 | -6.5340865E-02 | -1.0197575E-10 |
| 5 Q5   | -4.2112603E-02 | -7.2726128E-02 | -1.0105267E-01 | -3.1584996E-02 |
| 6 Q6   | -4.2112603E-02 | -7.2726126E-02 | -1.0105267E-01 | -3.1584996E-02 |
| 7 Q7   | -4.2112601E-02 | -7.2726126E-02 | -1.0105267E-01 | -3.1584996E-02 |
| 8 Q8   | -4.2112601E-02 | -7.2726128E-02 | -1.0105267E-01 | -3.1584996E-02 |
| 9 Q9   | 1.3810362E-09  | 2.0116251E-09  | 2.5951059E-09  | 8.7364986E-10  |
| 10 Q10 | 1.5130412E-01  | 7.2717081E-02  | 8.7916849E-07  | 0.             |
| 11 Q11 | 1.1049237E-01  | 5.3102868E-02  | 6.4261258E-07  | 1.3090033E-01  |
| 12 Q12 | 8.4223993E-02  | 4.0478230E-02  | 4.8940999E-07  | 9.9780176E-02  |
| 13 Q13 | 6.6338250E-02  | 3.1882305E-02  | 3.8556755E-07  | 7.8590931E-02  |
| 14 Q14 | 6.0130851E-02  | 2.8899014E-02  | 3.4901313E-07  | 7.0872700E-02  |
| 15 Q15 | 6.0130860E-02  | 2.8899019E-02  | 3.4878030E-07  | 7.0872707E-02  |
| 16 Q16 | 1.6656725E-01  | 8.0052570E-02  | 9.6764416E-07  | 1.6214044E-01  |
| 17 Q17 | 1.6656726E-01  | 8.0052574E-02  | 9.6764416E-07  | 1.6214045E-01  |
| 18 Q18 | -1.8557480E-09 | -8.9187639E-10 | -1.0783041E-14 | -1.7280100E-09 |
| 19 Q25 | 9.2946129E-10  | 4.4670107E-10  | 5.4019287E-15  | 6.9710927E-10  |
| 20 Q30 | -1.0647809E-01 | -5.1173595E-02 | -6.1886383E-07 | -9.1303492E-02 |
| 21 Q31 | 0.             | 0.             | 0.             | 0.             |
| 22 Q32 | 0.             | 0.             | 0.             | 0.             |
| 23 Q33 | 0.             | 0.             | 0.             | 0.             |
| 24 Q34 | 0.             | 0.             | 0.             | 0.             |
| 25 Q35 | -1.2639736E-09 | -6.0746840E-10 | -7.3482884E-15 | -9.4799829E-10 |
| 26 Q36 | -5.9517297E-10 | -2.8604139E-10 | -3.4590386E-15 | -4.4638824E-10 |
| 27 Q37 | -5.6903464E-02 | -2.7347926E-02 | -3.3061951E-07 | -4.2678413E-02 |
| 28 Q38 | -2.9053241E-02 | -1.3963049E-02 | -1.6915146E-07 | -2.1790346E-02 |
| 29 P40 | -2.0414591E-06 | -1.3165131E 00 | -2.5346742E 00 | 0.             |
| 30 P41 | -3.4272671E-06 | -2.2816348E 00 | -4.3928171E 00 | 3.3640696E-09  |
| 31 P42 | -4.5299530E-06 | -3.0196032E 00 | -5.8136230E 00 | 6.7281385E-09  |
| 32 P43 | -5.3942204E-06 | -3.6021138E 00 | -6.9351270E 00 | 1.5181197E-08  |
| 33 P44 | -5.4240227E-06 | -3.6003129E 00 | -6.9316596E 00 | -2.9297145E-09 |
| 34 P45 | -8.2907603E-01 | -5.0320719E 00 | -8.9210831E 00 | -6.2181379E-01 |
| 35 P46 | -1.6581891E 00 | -6.4639040E 00 | -1.0910608E 01 | -1.2436592E 00 |
| 36 P47 | -2.4372723E 00 | -7.8093373E 00 | -1.2780083E 01 | -1.8279816E 00 |
| 37 P48 | -3.2163551E 00 | -9.1547705E 00 | -1.4649557E 01 | -2.4123041E 00 |
| 38 P49 | -3.2163553E 00 | -9.1547705E 00 | -1.4649557E 01 | -2.4123041E 00 |
| 39 P50 | -3.2344055E 00 | -1.5544621E 00 | -1.8790364E-05 | 0.             |
| 40 P51 | -5.5963843E 00 | -2.6896342E 00 | -3.2544135E-05 | -2.7982367E 00 |
| 41 P52 | -7.3970007E 00 | -3.5550142E 00 | -4.3034554E-05 | -4.9314271E 00 |
| 42 P53 | -8.8151033E 00 | -4.2365574E 00 | -5.1259995E-05 | -6.6114538E 00 |
| 43 P54 | -7.4231477E 00 | -3.5675805E 00 | -4.3183565E-05 | -5.5674669E 00 |
| 44 P55 | -8.6651621E 00 | -4.1644953E 00 | -5.0365923E-05 | -7.0313566E 00 |
| 45 P56 | -9.9072435E 00 | -4.7614422E 00 | -5.7578085E-05 | -8.4953245E 00 |
| 46 P57 | -9.4425937E 00 | -4.5381306E 00 | -5.4895876E-05 | -8.0968938E 00 |
| 47 P58 | -1.0554243E 01 | -5.0723917E 00 | -6.1333177E-05 | -9.4073775E 00 |
| 48 P59 | -1.1665893E 01 | -5.6066529E 00 | -6.7770479E-05 | -1.0717861E 01 |
| 49 P60 | -1.1665893E 01 | -5.6066529E 00 | -6.7770479E-05 | -1.0717861E 01 |
| 50 P62 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | P100           | P101           | P102           | P103           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 0.             | 0.             | 0.             | 0.             |
| 52 P64 | 0.             | 0.             | 0.             | 0.             |
| 53 P67 | 0.             | 0.             | 0.             | 0.             |
| 54 P68 | 0.             | 0.             | 0.             | 0.             |
| 55 P69 | 0.             | 0.             | 0.             | 0.             |
| 56 P72 | 1.7124296E-08  | 8.2299726E-09  | 9.9587003E-14  | 1.2843467E-08  |
| 57 P73 | 1.7120865E-08  | 8.2283235E-09  | 9.9364959E-14  | 1.2840894E-08  |
| 58 P74 | -2.2208036E-09 | -1.0673229E-09 | -1.2906343E-14 | -1.6656345E-09 |
| 59 P77 | 3.0151334E 00  | 1.4490795E 00  | 1.7538667E-05  | 2.2613931E 00  |
| 60 P79 | 1.0191304E 00  | 4.8979625E-01  | 5.9343874E-06  | 7.6436241E-01  |
| 61 P80 | 1.0189262E 00  | 4.8969809E-01  | 5.9343874E-06  | 7.6420922E-01  |
| 62 P81 | -1.3216827E-01 | -6.3520347E-02 | -7.6834110E-07 | -9.7128088E-02 |
| 63 P82 | 1.5366822E-07  | 1.0950425E-01  | 2.1082785E-01  | -1.8626451E-09 |
| 64 P83 | 0.             | 0.             | 0.             | 0.             |
| 65 P84 | 0.             | 0.             | 0.             | 0.             |
| 66 P93 | 0.             | 0.             | 0.             | 0.             |
| 67 P94 | 0.             | 0.             | 0.             | 0.             |
| 68 P95 | 0.             | 0.             | 0.             | 0.             |
| 69 P96 | 4.1691478E-01  | 7.1998869E-01  | 1.0004215E 00  | 3.1269147E-01  |
| 70 P97 | 1.6157025E 00  | 7.7651004E-01  | 9.3877316E-06  | 1.5727625E 00  |
| 71 Q19 | 0.             | 0.             | 0.             | 0.             |
| 72 Q20 | 0.             | 0.             | 0.             | 0.             |
| 73 Q21 | 0.             | 0.             | 0.             | 0.             |
| 74 Q22 | 0.             | 0.             | 0.             | 0.             |
| 75 Q23 | 0.             | 0.             | 0.             | 0.             |
| 76 Q24 | 0.             | 0.             | 0.             | 0.             |
| 77 Q26 | 0.             | 0.             | 0.             | 0.             |
| 78 Q28 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | P104           | P105           | P106           | P107           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 0.             | 0.             | 0.             | 0.             |
| 2 Q2   | -6.5021668E-02 | -1.2796560E-01 | 6.1468485E-10  | 1.6857202E-10  |
| 3 Q3   | -4.9715114E-02 | -9.7841603E-02 | 3.7743084E-10  | -5.6837533E-02 |
| 4 Q4   | -3.9244598E-02 | -7.7235153E-02 | -6.7987335E-11 | -4.4866962E-02 |
| 5 Q5   | -6.6835726E-02 | -1.0104732E-01 | -2.1057752E-02 | -6.1285351E-02 |
| 6 Q6   | -6.6835725E-02 | -1.0104732E-01 | -2.1057752E-02 | -6.1285349E-02 |
| 7 Q7   | -6.6835725E-02 | -1.0104732E-01 | -2.1057752E-02 | -6.1285349E-02 |
| 8 Q8   | -6.6835726E-02 | -1.0104732E-01 | -2.1057753E-02 | -6.1285351E-02 |
| 9 Q9   | 1.3830338E-09  | 3.7263197E-09  | 1.1680206E-10  | 7.6384744E-10  |
| 10 Q10 | 0.             | 0.             | 0.             | 0.             |
| 11 Q11 | 6.4203665E-02  | 0.             | 0.             | 4.6566128E-10  |
| 12 Q12 | 4.8939930E-02  | 0.             | 1.1534025E-01  | 5.7081878E-02  |
| 13 Q13 | 3.8547084E-02  | 0.             | 9.0846682E-02  | 4.4960011E-02  |
| 14 Q14 | 3.4761465E-02  | 0.             | 8.1617296E-02  | 4.0392392E-02  |
| 15 Q15 | 3.4761468E-02  | 0.             | 8.1617301E-02  | 4.0392393E-02  |
| 16 Q16 | 7.9526236E-02  | 0.             | 1.5771814E-01  | 7.8054692E-02  |
| 17 Q17 | 7.9526241E-02  | 0.             | 1.5771815E-01  | 7.8054693E-02  |
| 18 Q18 | -8.4755002E-10 | 0.             | -1.6003151E-09 | -7.9199580E-10 |
| 19 Q25 | 3.4191641E-10  | 0.             | 4.6476353E-10  | 2.3001142E-10  |
| 20 Q30 | -4.4782308E-02 | 0.             | -7.6130654E-02 | -3.7677053E-02 |
| 21 Q31 | 5.6013600E-02  | 0.             | 0.             | 0.             |
| 22 Q32 | -5.8028225E-02 | 0.             | 0.             | 0.             |
| 23 Q33 | 0.             | 0.             | 0.             | 4.6596354E-02  |
| 24 Q34 | 0.             | 0.             | 0.             | -4.7399395E-02 |
| 25 Q35 | -4.6497184E-10 | 0.             | -6.3203151E-10 | -3.1279233E-10 |
| 26 Q36 | -2.1894339E-10 | 0.             | -2.9760754E-10 | -1.4728594E-10 |
| 27 Q37 | -2.0932802E-02 | 0.             | -2.8453746E-02 | -1.4081756E-02 |
| 28 Q38 | -1.0687674E-02 | 0.             | -1.4527648E-02 | -7.1897314E-03 |
| 29 P40 | 0.             | 0.             | 0.             | 0.             |
| 30 P41 | -1.1160255E 00 | -2.1963888E 00 | 2.2428290E-09  | -1.9938964E-08 |
| 31 P42 | -1.9693805E 00 | -3.8758302E 00 | 4.4856575E-09  | -9.7561059E-01 |
| 32 P43 | -2.6429709E 00 | -5.2014866E 00 | 1.0121321E-08  | -1.7457026E 00 |
| 33 P44 | -2.6416494E 00 | -5.1988860E 00 | -1.9532438E-09 | -1.7448298E 00 |
| 34 P45 | -3.9574443E 00 | -7.1882045E 00 | -4.1456394E-01 | -2.9513545E 00 |
| 35 P46 | -5.2733061E 00 | -9.1776240E 00 | -8.2914875E-01 | -4.1579404E 00 |
| 36 P47 | -6.5097671E 00 | -1.1047000E 01 | -1.2187174E 00 | -5.2917194E 00 |
| 37 P48 | -7.7462280E 00 | -1.2916375E 01 | -1.6082858E 00 | -6.4254984E 00 |
| 38 P49 | -7.7462280E 00 | -1.2916375E 01 | -1.6082859E 00 | -6.4254985E 00 |
| 39 P50 | 0.             | 0.             | 0.             | 0.             |
| 40 P51 | -1.3724722E 00 | 0.             | 2.9802321E-08  | 7.4505805E-09  |
| 41 P52 | -2.4187540E 00 | 0.             | -2.4658477E 00 | -1.2203478E 00 |
| 42 P53 | -3.2427693E 00 | 0.             | -4.4078636E 00 | -2.1814512E 00 |
| 43 P54 | -2.7307172E 00 | 0.             | -3.7118364E 00 | -1.8369874E 00 |
| 44 P55 | -3.4487222E 00 | 0.             | -5.3976579E 00 | -2.6713003E 00 |
| 45 P56 | -4.1667655E 00 | 0.             | -7.0835695E 00 | -3.5056578E 00 |
| 46 P57 | -3.9713443E 00 | 0.             | -6.7513502E 00 | -3.3412425E 00 |
| 47 P58 | -4.6141070E 00 | 0.             | -8.2607186E 00 | -4.0882288E 00 |
| 48 P59 | -5.2568697E 00 | 0.             | -9.7700870E 00 | -4.8352152E 00 |
| 49 P60 | -5.2568697E 00 | 0.             | -9.7700870E 00 | -4.8352152E 00 |
| 50 P62 | 9.1325132E-01  | 0.             | 0.             | 0.             |

| GIRGIN | P104           | P105          | P106           | P107           |
|--------|----------------|---------------|----------------|----------------|
| 51 P63 | 9.1306831E-01  | 0.            | 0.             | 0.             |
| 52 P64 | 3.8156290E-01  | 0.            | 0.             | 0.             |
| 53 P67 | 0.             | 0.            | 0.             | 1.0548669E 00  |
| 54 P68 | 0.             | 0.            | 0.             | 1.0546555E 00  |
| 55 P69 | 0.             | 0.            | 0.             | 3.6319716E-01  |
| 56 P72 | 6.2994316E-09  | 0.            | 8.5627538E-09  | 4.2377058E-09  |
| 57 P73 | 6.2981694E-09  | 0.            | 8.5610378E-09  | 4.2368566E-09  |
| 58 P74 | -8.1695625E-10 | 0.            | -1.1104804E-09 | -5.4957660E-10 |
| 59 P77 | 1.1091624E 00  | 0.            | 1.5076733E 00  | 7.4614735E-01  |
| 60 P79 | 3.7490256E-01  | 0.            | 5.0960127E-01  | 2.5220162E-01  |
| 61 P80 | 3.7482743E-01  | 0.            | 5.0949913E-01  | 2.5215108E-01  |
| 62 P81 | -4.8620096E-02 | 0.            | -6.6088808E-02 | -3.2707344E-02 |
| 63 P82 | 8.0346309E-02  | 1.5812519E-01 | -1.8626451E-09 | 5.3069353E-02  |
| 64 P83 | 0.             | 0.            | 0.             | 0.             |
| 65 P84 | 0.             | 0.            | 0.             | 0.             |
| 66 P93 | 0.             | 0.            | 0.             | 0.             |
| 67 P94 | 0.             | 0.            | 0.             | 0.             |
| 68 P95 | 0.             | 0.            | 0.             | 0.             |
| 69 P96 | 6.6167371E-01  | 1.0003685E 00 | 2.0847175E-01  | 6.0672498E-01  |
| 70 P97 | 7.7140458E-01  | 0.            | 1.5298661E 00  | 7.9713058E-01  |
| 71 Q19 | 0.             | 0.            | 0.             | 0.             |
| 72 Q20 | 0.             | 0.            | 0.             | 0.             |
| 73 Q21 | 0.             | 0.            | 0.             | 0.             |
| 74 Q22 | 0.             | 0.            | 0.             | 0.             |
| 75 Q23 | 0.             | 0.            | 0.             | 0.             |
| 76 Q24 | 0.             | 0.            | 0.             | 0.             |
| 77 Q26 | 0.             | 0.            | 0.             | 0.             |
| 78 Q28 | 0.             | 0.            | 0.             | 0.             |

| GIRGIN | P100           | P109           | P110           | P111           |
|--------|----------------|----------------|----------------|----------------|
| 1 01   | 0.             | 0.             | 0.             | 0.             |
| 2 02   | -1.2007559E-09 | 3.0733658E-10  | -3.0146052E-11 | -1.2988748E-09 |
| 3 03   | -1.1290505E-01 | 1.8871182E-10  | 4.9575559E-10  | -1.2007015E-09 |
| 4 04   | -8.9126076E-02 | -3.3993019E-11 | -5.0473217E-02 | -1.0101214E-01 |
| 5 05   | -1.0103865E-01 | -1.0528676E-02 | -5.5738088E-02 | -1.0102403E-01 |
| 6 06   | -1.0103865E-01 | -1.0528676E-02 | -5.5738087E-02 | -1.0102403E-01 |
| 7 07   | -1.0103865E-01 | -1.0528676E-02 | -5.5738087E-02 | -1.0102403E-01 |
| 8 08   | -1.0103865E-01 | -1.0528676E-02 | -5.5738089E-02 | -1.0102403E-01 |
| 9 09   | 3.7260799E-09  | 1.7481081E-10  | 1.0760699E-09  | 1.8630304E-09  |
| 10 010 | 0.             | 0.             | 0.             | 0.             |
| 11 011 | 0.             | -4.6566128E-10 | -6.9849191E-10 | 0.             |
| 12 012 | 0.             | -4.6566128E-10 | -4.6566128E-10 | 0.             |
| 13 013 | 0.             | 1.0309703E-01  | 5.1495594E-02  | 0.             |
| 14 014 | 0.             | 9.2357032E-02  | 4.6131104E-02  | 0.             |
| 15 015 | 0.             | 9.2357037E-02  | 4.6131108E-02  | 0.             |
| 16 016 | 0.             | 1.5328535E-01  | 7.6563988E-02  | 0.             |
| 17 017 | 0.             | 1.5328536E-01  | 7.6563993E-02  | 0.             |
| 18 018 | 0.             | -1.4725103E-09 | -7.3549923E-10 | 0.             |
| 19 025 | 0.             | 2.3237733E-10  | -8.3189429E-11 | 0.             |
| 20 030 | 0.             | -6.0952188E-02 | -3.0444805E-02 | 0.             |
| 21 031 | 0.             | 0.             | 0.             | 0.             |
| 22 032 | 0.             | 0.             | 0.             | 0.             |
| 23 033 | 0.             | 0.             | 0.             | 0.             |
| 24 034 | 0.             | 0.             | 0.             | 0.             |
| 25 035 | 0.             | -3.1600974E-10 | 4.0006301E-02  | 0.             |
| 26 036 | 0.             | -1.4880094E-10 | -4.0021366E-02 | 0.             |
| 27 037 | 0.             | -1.4226602E-02 | -7.1059980E-03 | 0.             |
| 28 038 | 0.             | -7.2636856E-03 | -3.6281143E-03 | 0.             |
| 29 P40 | 0.             | 0.             | 0.             | 0.             |
| 30 P41 | -1.0594440E-08 | 1.1213931E-09  | -3.9481345E-09 | -2.3923540E-08 |
| 31 P42 | -1.9380039E 00 | 2.2427861E-09  | -4.0636816E-08 | -4.4705536E-08 |
| 32 P43 | -3.4677549E 00 | 5.0605642E-09  | -8.6631725E-01 | -1.7337623E 00 |
| 33 P44 | -3.4660210E 00 | -9.7660331E-10 | -8.6588410E-01 | -1.7328955E 00 |
| 34 P45 | -5.4551688E 00 | -2.0727802E-01 | -1.9631998E 00 | -3.7217554E 00 |
| 35 P46 | -7.4444180E 00 | -4.1456658E-01 | -3.0605714E 00 | -5.7107165E 00 |
| 36 P47 | -9.3136326E 00 | -6.0934708E-01 | -4.0917259E 00 | -7.5796610E 00 |
| 37 P48 | -1.1182848E 01 | -8.0412754E-01 | -5.1228806E 00 | -9.4486053E 00 |
| 38 P49 | -1.1182848E 01 | -8.0412759E-01 | -5.1228807E 00 | -9.4486053E 00 |
| 39 P50 | 0.             | 0.             | 0.             | 0.             |
| 40 P51 | 0.             | 2.2351742E-08  | 1.1175871E-08  | 0.             |
| 41 P52 | 0.             | 2.9802321E-08  | 1.4901161E-08  | 0.             |
| 42 P53 | 0.             | -2.2038898E 00 | -1.1008136E 00 | 0.             |
| 43 P54 | 0.             | -1.8558828E 00 | -9.2698871E-01 | 0.             |
| 44 P55 | 0.             | -3.7635358E 00 | -1.8798359E 00 | 0.             |
| 45 P56 | 0.             | -5.6712905E 00 | -2.8327340E 00 | 0.             |
| 46 P57 | 0.             | -5.4053070E 00 | -2.6998787E 00 | 0.             |
| 47 P58 | 0.             | -7.1134706E 00 | -3.5530837E 00 | 0.             |
| 48 P59 | 0.             | -8.8216343E 00 | -4.4062886E 00 | 0.             |
| 49 P60 | 0.             | -8.8216343E 00 | -4.4062886E 00 | 0.             |
| 50 P62 | 0.             | 0.             | 0.             | 0.             |



| GIRGIN | P108          | P109           | P110           | P111          |
|--------|---------------|----------------|----------------|---------------|
| 51 P63 | 0.            | 0.             | 0.             | 0.            |
| 52 P64 | 0.            | 0.             | 0.             | 0.            |
| 53 P67 | 0.            | 0.             | 0.             | 0.            |
| 54 P68 | 0.            | 0.             | 0.             | 0.            |
| 55 P69 | 0.            | 0.             | 0.             | 0.            |
| 56 P72 | 0.            | 4.2812951E-09  | 1.1514934E 00  | 0.            |
| 57 P73 | 0.            | 4.2804374E-09  | 1.1512626E 00  | 0.            |
| 58 P74 | 0.            | -5.5522960E-10 | 3.5066594E-01  | 0.            |
| 59 P77 | 0.            | 7.5382290E-01  | 3.7652419E-01  | 0.            |
| 60 P79 | 0.            | 2.5479578E-01  | 1.2726710E-01  | 0.            |
| 61 P80 | 0.            | 2.5474472E-01  | 1.2724159E-01  | 0.            |
| 62 P81 | 0.            | -3.3043775E-02 | -1.6504925E-02 | 0.            |
| 63 P82 | 1.0541974E-01 | -9.3132257E-10 | 2.6336040E-02  | 5.2706367E-02 |
| 64 P83 | 0.            | 0.             | 0.             | 0.            |
| 65 P84 | 0.            | 0.             | 0.             | 0.            |
| 66 P93 | 0.            | 0.             | 0.             | 0.            |
| 67 P94 | 0.            | 0.             | 0.             | 0.            |
| 68 P95 | 0.            | 0.             | 0.             | 0.            |
| 69 P96 | 1.0002827E 00 | 1.0423389E-01  | 5.5180708E-01  | 1.0001379E 00 |
| 70 P97 | 0.            | 1.4868681E 00  | 7.4267076E-01  | 0.            |
| 71 Q19 | 0.            | 0.             | 0.             | 0.            |
| 72 Q20 | 0.            | 0.             | 0.             | 0.            |
| 73 Q21 | 0.            | 0.             | 0.             | 0.            |
| 74 Q22 | 0.            | 0.             | 0.             | 0.            |
| 75 Q23 | 0.            | 0.             | 0.             | 0.            |
| 76 Q24 | 0.            | 0.             | 0.             | 0.            |
| 77 Q26 | 0.            | 0.             | 0.             | 0.            |
| 78 Q28 | 0.            | 0.             | 0.             | 0.            |

| GIRGIN | P112            | P113           | P114           | P115           |
|--------|-----------------|----------------|----------------|----------------|
| 1 01   | 0.              | 0.             | 0.             | 0.             |
| 2 02   | -2.8223281E-10  | 0.             | 1.4743343E-09  | 4.6546128E-10  |
| 3 03   | -1.7329753E-10  | 0.             | 9.0527563E-10  | 1.3969839E-09  |
| 4 04   | 3.1216417E-11   | 0.             | 1.1968148E-09  | 6.9849194E-10  |
| 5 05   | 9.6686755E-03   | 0.             | -5.0507451E-02 | -1.0101010E-01 |
| 6 06   | 9.6686755E-03   | 0.             | -5.0507451E-02 | -1.0101010E-01 |
| 7 07   | 9.6686757E-03   | 0.             | -5.0507451E-02 | -1.0101010E-01 |
| 8 08   | 9.6686759E-03   | 0.             | -5.0507454E-02 | -1.0101010E-01 |
| 9 09   | -7.2442634E-11  | 0.             | 9.3138905E-10  | 2.7939679E-09  |
| 10 010 | 0.              | 0.             | 0.             | 0.             |
| 11 011 | 7.7998264E-10   | 0.             | 0.             | 0.             |
| 12 012 | 3.8999132E-10   | 0.             | -4.2406672E-18 | 0.             |
| 13 013 | 8.1424742E-10   | 0.             | 8.3962973E-10  | 0.             |
| 14 014 | 1.1295712E-01   | 1.0309278E-01  | 5.1550356E-02  | 0.             |
| 15 015 | 1.1295712E-01   | 1.0309278E-01  | 5.1550356E-02  | 0.             |
| 16 016 | 1.6308991E-01   | 1.4884757E-01  | 7.4429507E-02  | 0.             |
| 17 017 | 1.6308992E-01   | 1.4884757E-01  | 7.4429509E-02  | 0.             |
| 18 018 | -1.4902359E-09  | -1.3446636E-09 | -6.7238351E-10 | 0.             |
| 19 029 | -2.1339637E-10  | 0.             | -5.6917273E-10 | 0.             |
| 20 030 | -5.0152431E-02  | -4.5772710E-02 | -2.2888116E-02 | 0.             |
| 21 031 | 0.              | 0.             | 0.             | 0.             |
| 22 032 | 0.              | 0.             | 0.             | 0.             |
| 23 033 | 0.              | 0.             | 0.             | 0.             |
| 24 034 | 0.              | 0.             | 0.             | 0.             |
| 25 035 | 2.9019754E-10   | 0.             | 7.7401754E-10  | 0.             |
| 26 036 | 1.3664663E-10   | 0.             | 3.6446514E-10  | 0.             |
| 27 037 | 1.3064550E-02   | 0.             | 3.4845886E-02  | 0.             |
| 28 038 | 6.6703756E-03   | 0.             | -3.4844863E-02 | 0.             |
| 29 P40 | 0.              | 0.             | 0.             | 0.             |
| 30 P41 | -1.0297959E-09  | 0.             | 5.3794715E-09  | -2.2351742E-08 |
| 31 P42 | -2.0595916E-09  | 0.             | 1.0758943E-08  | -1.4901162E-08 |
| 32 P43 | -4.66472089E-09 | 0.             | 4.7617108E-08  | 2.9802321E-08  |
| 33 P44 | 8.9683275E-10   | 0.             | 1.8644345E-08  | -1.4901162E-08 |
| 34 P45 | 1.9034721E-01   | 0.             | -9.9434016E-01 | -1.9885858E 00 |
| 35 P46 | 3.8070411E-01   | 0.             | -1.9887309E 00 | -3.9772727E 00 |
| 36 P47 | 5.5957459E-01   | 0.             | -2.9231187E 00 | -5.8459595E 00 |
| 37 P48 | 7.3844512E-01   | 0.             | -3.8575067E 00 | -7.7146466E 00 |
| 38 P49 | 7.3844512E-01   | 0.             | -3.8575067E 00 | -7.7146466E 00 |
| 39 P50 | 0.              | 0.             | 0.             | 0.             |
| 40 P51 | -2.4959445E-08  | 0.             | 2.7140270E-16  | 0.             |
| 41 P52 | -2.4959445E-08  | 0.             | 2.7140270E-16  | 0.             |
| 42 P53 | -4.4153807E-08  | 0.             | -3.0115757E-08 | 0.             |
| 43 P54 | -4.5064147E-08  | 0.             | -2.5360306E-08 | 0.             |
| 44 P55 | -2.3331520E 00  | -2.1294020E 00 | -1.0647829E 00 | 0.             |
| 45 P56 | -4.6664281E 00  | -4.2589175E 00 | -2.1296225E 00 | 0.             |
| 46 P57 | -4.4475726E 00  | -4.0591743E 00 | -2.0297433E 00 | 0.             |
| 47 P58 | -6.5369161E 00  | -5.9660591E 00 | -2.9832591E 00 | 0.             |
| 48 P59 | -8.6262597E 00  | -7.8729442E 00 | -3.9367747E 00 | 0.             |
| 49 P60 | -8.6262597E 00  | -7.8729442E 00 | -3.9367749E 00 | 0.             |
| 50 P62 | 0.              | 0.             | 0.             | 0.             |

| GIRGIN | P112           | P113          | P114           | P115          |
|--------|----------------|---------------|----------------|---------------|
| 51 P63 | 0.             | 0.            | 0.             | 0.            |
| 52 P64 | 0.             | 0.            | 0.             | 0.            |
| 53 P67 | 0.             | 0.            | 0.             | 0.            |
| 54 P68 | 0.             | 0.            | 0.             | 0.            |
| 55 P69 | 0.             | 0.            | 0.             | 0.            |
| 56 P72 | -3.9315920E-09 | 0.            | -1.0486378E-08 | 0.            |
| 57 P73 | -3.9308042E-09 | 0.            | -1.0484277E-08 | 0.            |
| 58 P74 | 5.0987753E-10  | 0.            | 1.3599500E-09  | 0.            |
| 59 P77 | -6.9224883E-01 | 0.            | 1.0300847E-08  | 0.            |
| 60 P79 | -2.3398364E-01 | 0.            | 1.2222892E 00  | 0.            |
| 61 P80 | -2.3393679E-01 | 0.            | 1.2220442E 00  | 0.            |
| 62 P81 | 3.0344705E-02  | 0.            | 3.4148462E-01  | 0.            |
| 63 P82 | 3.8999132E-10  | 0.            | -3.7252903E-09 | 5.0000001E-01 |
| 64 P83 | 0.             | 0.            | 0.             | 0.            |
| 65 P84 | 0.             | 0.            | 0.             | 0.            |
| 66 P93 | 0.             | 0.            | 0.             | 0.            |
| 67 P94 | 0.             | 0.            | 0.             | 0.            |
| 68 P95 | 0.             | 0.            | 0.             | 0.            |
| 69 P96 | -9.5719892E-02 | 0.            | 5.0002379E-01  | 1.0000000E 00 |
| 70 P97 | 1.5819723E 00  | 1.4438215E 00 | 7.2196630E-01  | 0.            |
| 71 Q19 | 0.             | 0.            | 0.             | 0.            |
| 72 Q20 | 0.             | 0.            | 0.             | 0.            |
| 73 Q21 | 0.             | 0.            | 0.             | 0.            |
| 74 Q22 | 0.             | 0.            | 0.             | 0.            |
| 75 Q23 | 0.             | 0.            | 0.             | 0.            |
| 76 Q24 | 0.             | 0.            | 0.             | 0.            |
| 77 Q26 | 0.             | 0.            | 0.             | 0.            |
| 78 Q28 | 0.             | 0.            | 0.             | 0.            |

| SIRGIN | P116           | P117           | P118           | P119           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 0.             | 0.             | 0.             | 0.             |
| 2 Q2   | 0.             | 4.6566127E-10  | 0.             | 0.             |
| 3 Q3   | 0.             | 1.3969838E-09  | 0.             | 0.             |
| 4 Q4   | 0.             | 6.9849191E-10  | 0.             | 0.             |
| 5 Q5   | 0.             | 2.7939677E-09  | 0.             | 0.             |
| 6 Q6   | 0.             | -1.0101010E-01 | 0.             | 0.             |
| 7 Q7   | 0.             | -1.0101010E-01 | 0.             | 0.             |
| 8 Q8   | 0.             | -1.0101010E-01 | 0.             | 0.             |
| 9 Q9   | 0.             | 1.8626491E-09  | 0.             | 0.             |
| 10 Q10 | 0.             | 0.             | 0.             | 0.             |
| 11 Q11 | 0.             | 0.             | 0.             | 0.             |
| 12 Q12 | 0.             | 0.             | 0.             | 0.             |
| 13 Q13 | 0.             | 0.             | 0.             | 0.             |
| 14 Q14 | 0.             | 0.             | -6.6424543E-10 | -9.3132257E-10 |
| 15 Q15 | 1.0309278E-01  | 0.             | -6.6424543E-10 | -9.3132257E-10 |
| 16 Q16 | 1.2597078E-01  | 0.             | 6.9504631E-02  | 1.0309278E-01  |
| 17 Q17 | 1.2597078E-01  | 0.             | 6.9504634E-02  | 1.0309278E-01  |
| 18 Q18 | -9.0516793E-10 | 0.             | -6.9638596E-10 | -4.6566131E-10 |
| 19 Q25 | 0.             | 0.             | 0.             | 0.             |
| 20 Q30 | -2.2886964E-02 | 0.             | 3.3601312E-02  | 9.3132257E-10  |
| 21 Q31 | 0.             | 0.             | 0.             | 0.             |
| 22 Q32 | 0.             | 0.             | 0.             | 0.             |
| 23 Q33 | 0.             | 0.             | 0.             | 0.             |
| 24 Q34 | 0.             | 0.             | 0.             | 0.             |
| 25 Q35 | 0.             | 0.             | 0.             | 0.             |
| 26 Q36 | 0.             | 0.             | 0.             | 0.             |
| 27 Q37 | 0.             | 0.             | 0.             | 0.             |
| 28 Q38 | 0.             | 0.             | 0.             | 0.             |
| 29 P40 | 0.             | 0.             | 0.             | 0.             |
| 30 P41 | 0.             | 7.4505806E-09  | 0.             | 0.             |
| 31 P42 | 0.             | 1.4901161E-08  | 0.             | 0.             |
| 32 P43 | 0.             | -1.1102230E-15 | 0.             | 0.             |
| 33 P44 | 0.             | 1.4901161E-08  | 0.             | 0.             |
| 34 P45 | 0.             | 1.7881393E-07  | 0.             | 0.             |
| 35 P46 | 0.             | -1.9886867E 00 | 0.             | 0.             |
| 36 P47 | 0.             | -3.8573735E 00 | 0.             | 0.             |
| 37 P48 | 0.             | -5.7260604E 00 | 0.             | 0.             |
| 38 P49 | 0.             | -5.7260604E 00 | 0.             | 0.             |
| 39 P50 | 0.             | 0.             | 0.             | 0.             |
| 40 P51 | 0.             | 0.             | 0.             | 0.             |
| 41 P52 | 0.             | 0.             | 0.             | 0.             |
| 42 P53 | 0.             | 0.             | 0.             | 0.             |
| 43 P54 | 0.             | 0.             | 0.             | 0.             |
| 44 P55 | 0.             | 0.             | 2.1255853E-08  | 2.9802321E-08  |
| 45 P56 | -2.1295154E 00 | 0.             | 8.0860496E-08  | 8.9406964E-08  |
| 46 P57 | -2.0296412E 00 | 0.             | 5.1058177E-08  | 5.9604642E-08  |
| 47 P58 | -3.9366918E 00 | 0.             | -1.9074600E 00 | -1.9072164E 00 |
| 48 P59 | -5.8437429E 00 | 0.             | -3.8149199E 00 | -3.8144329E 00 |
| 49 P60 | -5.8437429E 00 | 0.             | -3.8149200E 00 | -3.8144329E 00 |
| 50 P62 | 0.             | 0.             | 0.             | 0.             |

| GIRGIN | P116          | P117           | P118          | P119          |
|--------|---------------|----------------|---------------|---------------|
| 51 P63 | 0.            | 0.             | 0.            | 0.            |
| 52 P64 | 0.            | 0.             | 0.            | 0.            |
| 53 P67 | 0.            | 0.             | 0.            | 0.            |
| 54 P68 | 0.            | 0.             | 0.            | 0.            |
| 55 P69 | 0.            | 0.             | 0.            | 0.            |
| 56 P72 | 0.            | 0.             | 0.            | 0.            |
| 57 P73 | 0.            | 0.             | 0.            | 0.            |
| 58 P74 | 0.            | 0.             | 0.            | 0.            |
| 59 P77 | 0.            | 0.             | 0.            | 0.            |
| 60 P79 | 0.            | 0.             | 0.            | 0.            |
| 61 P80 | 0.            | 0.             | 0.            | 0.            |
| 62 P81 | 0.            | 0.             | 0.            | 0.            |
| 63 P82 | 0.            | -7.4509809E-09 | 0.            | 0.            |
| 64 P83 | 0.            | 0.             | 0.            | 0.            |
| 65 P84 | 0.            | 0.             | 0.            | 0.            |
| 66 P93 | 0.            | 0.             | 0.            | 0.            |
| 67 P94 | 0.            | 0.             | 0.            | 0.            |
| 68 P95 | 0.            | 0.             | 0.            | 0.            |
| 69 P96 | 0.            | 1.0000000E 00  | 0.            | 0.            |
| 70 P97 | 1.2219167E 00 | 0.             | 6.7419497E-01 | 1.0000000E 00 |
| 71 Q19 | 0.            | 0.             | 0.            | 0.            |
| 72 Q20 | 0.            | 0.             | 0.            | 0.            |
| 73 Q21 | 0.            | 0.             | 0.            | 0.            |
| 74 Q22 | 0.            | 0.             | 0.            | 0.            |
| 75 Q23 | 0.            | 0.             | 0.            | 0.            |
| 76 Q24 | 0.            | 0.             | 0.            | 0.            |
| 77 Q26 | 0.            | 0.             | 0.            | 0.            |
| 78 Q28 | 0.            | 0.             | 0.            | 0.            |

| GIRGIN | P120           | P121           | P122           | P123           |
|--------|----------------|----------------|----------------|----------------|
| 1 01   | 0.             | 0.             | 0.             | 0.             |
| 2 02   | 2.2992029E-10  | -1.8207659E-12 | 4.6566127E-10  | 0.             |
| 3 03   | 2.2992029E-10  | -5.9207657E-12 | 4.6566126E-10  | 0.             |
| 4 04   | -1.1496013E-10 | 2.6103832E-12  | -2.3283065E-10 | 0.             |
| 5 05   | 9.3132257E-10  | -1.451915E-11  | 1.8626451E-09  | 0.             |
| 6 06   | 9.3132257E-10  | -1.4551915E-11 | 1.8626451E-09  | 0.             |
| 7 07   | -4.9873735E-02 | 1.2626262E-03  | -1.0101010E-01 | 0.             |
| 8 08   | -4.9873735E-02 | 1.2626262E-03  | -1.0101010E-01 | 0.             |
| 9 09   | 4.5984054E-10  | -1.1641533E-11 | 9.3132259E-10  | 0.             |
| 10 010 | 0.             | 0.             | 0.             | 0.             |
| 11 011 | 0.             | 0.             | 0.             | 0.             |
| 12 012 | 0.             | 0.             | 0.             | 0.             |
| 13 013 | 0.             | 0.             | 0.             | 0.             |
| 14 014 | -4.6566128E-10 | 7.2759576E-12  | 0.             | -9.3132257E-10 |
| 15 015 | -4.6566128E-10 | 0.             | 0.             | -9.3132257E-10 |
| 16 016 | 5.6823105E-02  | 1.4030397E-03  | 0.             | -1.8626451E-09 |
| 17 017 | 5.6823105E-02  | 1.4030397E-03  | 0.             | 1.0309278E-01  |
| 18 018 | -1.5971869E-10 | -3.9436718E-12 | 0.             | 0.             |
| 19 025 | 0.             | 0.             | 0.             | 0.             |
| 20 030 | -4.6341990E-03 | -1.1442468E-04 | 0.             | 4.6566128E-10  |
| 21 031 | 0.             | 0.             | 0.             | 0.             |
| 22 032 | 0.             | 0.             | 0.             | 0.             |
| 23 033 | 0.             | 0.             | 0.             | 0.             |
| 24 034 | 0.             | 0.             | 0.             | 0.             |
| 25 035 | 0.             | 0.             | 0.             | 0.             |
| 26 036 | 0.             | 0.             | 0.             | 0.             |
| 27 037 | 0.             | 0.             | 0.             | 0.             |
| 28 038 | 0.             | 0.             | 0.             | 0.             |
| 29 P40 | 0.             | 0.             | 0.             | 0.             |
| 30 P41 | -3.6787241E-09 | 9.3132255E-11  | -7.4505801E-09 | 0.             |
| 31 P42 | -7.3574482E-09 | 1.8626452E-10  | -1.4901161E-08 | 0.             |
| 32 P43 | -4.4408921E-16 | 1.0408341E-17  | -1.1102230E-15 | 0.             |
| 33 P44 | -7.3574482E-09 | 1.8626452E-10  | -1.4901161E-08 | 0.             |
| 34 P45 | 7.4505805E-09  | -2.3283064E-10 | 2.9802321E-08  | 0.             |
| 35 P46 | 0.             | 4.6566128E-10  | 2.9802321E-08  | 0.             |
| 36 P47 | -9.2266408E-01 | 2.3358585E-02  | -1.8686868E 00 | 0.             |
| 37 P48 | -1.8453283E 00 | 4.6717170E-02  | -3.7373737E 00 | 0.             |
| 38 P49 | -1.8453283E 00 | 4.6717170E-02  | -3.7373737E 00 | 0.             |
| 39 P50 | 0.             | 0.             | 0.             | 0.             |
| 40 P51 | 0.             | 0.             | 0.             | 0.             |
| 41 P52 | 0.             | 0.             | 0.             | 0.             |
| 42 P53 | 0.             | 0.             | 0.             | 0.             |
| 43 P54 | 0.             | 0.             | 0.             | 0.             |
| 44 P55 | 1.4901161E-08  | 4.6566128E-10  | 0.             | 1.4901161E-08  |
| 45 P56 | 1.4901161E-08  | 0.             | 0.             | 2.9802321E-08  |
| 46 P57 | 0.             | 4.6566128E-10  | 0.             | 2.9802321E-08  |
| 47 P58 | -9.6549473E-01 | -2.3839377E-02 | 0.             | 0.             |
| 48 P59 | -1.9309895E 00 | -4.7678754E-02 | 0.             | -1.9072164E 00 |
| 49 P60 | -1.9309895E 00 | -4.7678754E-02 | 0.             | -1.9072164E 00 |
| 50 P62 | 0.             | 0.             | 0.             | 0.             |

| GIRGIN | P120           | P121           | P122           | P123          |
|--------|----------------|----------------|----------------|---------------|
| 51 P63 | 0.             | 0.             | 0.             | 0.            |
| 52 P64 | 0.             | 0.             | 0.             | 0.            |
| 53 P67 | 0.             | 0.             | 0.             | 0.            |
| 54 P68 | 0.             | 0.             | 0.             | 0.            |
| 55 P69 | 0.             | 0.             | 0.             | 0.            |
| 56 P72 | 0.             | 0.             | 0.             | 0.            |
| 57 P73 | 0.             | 0.             | 0.             | 0.            |
| 58 P74 | 0.             | 0.             | 0.             | 0.            |
| 59 P77 | 0.             | 0.             | 0.             | 0.            |
| 60 P79 | 0.             | 0.             | 0.             | 0.            |
| 61 P80 | 0.             | 0.             | 0.             | 0.            |
| 62 P81 | 0.             | 0.             | 0.             | 0.            |
| 63 P82 | -1.8626451E-09 | 5.8207662E-11  | -7.4505805E-09 | 0.            |
| 64 P83 | -5.0624998E-01 | -1.2500000E-02 | 0.             | 0.            |
| 65 P84 | -4.9374998E-01 | 1.2500000E-02  | 0.             | 0.            |
| 66 P93 | 0.             | 0.             | 0.             | 0.            |
| 67 P94 | 0.             | 0.             | 0.             | 0.            |
| 68 P95 | 0.             | 0.             | 0.             | 0.            |
| 69 P96 | 4.9374998E-01  | -1.2500000E-02 | 1.0000000E 00  | 0.            |
| 70 P97 | 5.5118412E-01  | 1.3609485E-02  | 0.             | 9.9999998E-01 |
| 71 Q19 | 0.             | 0.             | 0.             | 0.            |
| 72 Q20 | 0.             | 0.             | 0.             | 0.            |
| 73 Q21 | 0.             | 0.             | 0.             | 0.            |
| 74 Q22 | 0.             | 0.             | 0.             | 0.            |
| 75 Q23 | 0.             | 0.             | 0.             | 0.            |
| 76 Q24 | 0.             | 0.             | 0.             | 0.            |
| 77 Q26 | 0.             | 0.             | 0.             | 0.            |
| 78 Q28 | 0.             | 0.             | 0.             | 0.            |

| GIRGIM | P124           | P125           | P126           |
|--------|----------------|----------------|----------------|
| 1 Q1   | 0.             | 0.             | 0.             |
| 2 Q2   | -6.9388937E-18 | 0.             | -2.3283064E-10 |
| 3 Q3   | -1.3877788E-17 | 0.             | -2.3283065E-10 |
| 4 Q4   | -6.9388937E-18 | 0.             | -1.1641532E-10 |
| 5 Q5   | 9.3132257E-10  | 0.             | 4.6566128E-10  |
| 6 Q6   | 9.3132257E-10  | 0.             | 4.6566128E-10  |
| 7 Q7   | 9.3132257E-10  | 0.             | 4.6566128E-10  |
| 8 Q8   | -1.0101010E-01 | 0.             | 4.6566128E-10  |
| 9 Q9   | 0.             | 0.             | 5.0505050E-02  |
| 10 Q10 | 0.             | 0.             | 0.             |
| 11 Q11 | 0.             | 0.             | 0.             |
| 12 Q12 | 0.             | 0.             | 0.             |
| 13 Q13 | 0.             | 0.             | 0.             |
| 14 Q14 | 0.             | -4.6566128E-10 | 0.             |
| 15 Q15 | 0.             | -4.6566128E-10 | 0.             |
| 16 Q16 | 0.             | -4.6566128E-10 | 0.             |
| 17 Q17 | 0.             | -4.6566128E-10 | 0.             |
| 18 Q18 | 0.             | -5.1546389E-02 | 0.             |
| 19 Q25 | 0.             | 0.             | 0.             |
| 20 Q30 | 0.             | 4.6566128E-10  | 0.             |
| 21 Q31 | 0.             | 0.             | 0.             |
| 22 Q32 | 0.             | 0.             | 0.             |
| 23 Q33 | 0.             | 0.             | 0.             |
| 24 Q34 | 0.             | 0.             | 0.             |
| 25 Q35 | 0.             | 0.             | 0.             |
| 26 Q36 | 0.             | 0.             | 0.             |
| 27 Q37 | 0.             | 0.             | 0.             |
| 28 Q38 | 0.             | 0.             | 0.             |
| 29 P40 | 0.             | 0.             | 0.             |
| 30 P41 | 2.2204460E-16  | 0.             | -3.7252902E-09 |
| 31 P42 | 1.4901161E-08  | 0.             | -7.4505805E-09 |
| 32 P43 | -1.4901161E-08 | 0.             | -1.4901161E-08 |
| 33 P44 | 0.             | 0.             | -7.4505805E-09 |
| 34 P45 | 1.4901161E-08  | 0.             | -7.4505805E-09 |
| 35 P46 | 2.9802321E-08  | 0.             | 0.             |
| 36 P47 | 5.9604642E-08  | 0.             | 2.9802321E-08  |
| 37 P48 | -1.8686868E 00 | 0.             | 0.             |
| 38 P49 | -1.8686869E 00 | 0.             | 1.2121212E 00  |
| 39 P50 | 0.             | 0.             | 0.             |
| 40 P51 | 0.             | 0.             | 0.             |
| 41 P52 | 0.             | 0.             | 0.             |
| 42 P53 | 0.             | 0.             | 0.             |
| 43 P54 | 0.             | 0.             | 0.             |
| 44 P55 | 0.             | 7.4505805E-09  | 0.             |
| 45 P56 | 0.             | 2.9802321E-08  | 0.             |
| 46 P57 | 0.             | 1.4901161E-08  | 0.             |
| 47 P58 | 0.             | 2.9802321E-08  | 0.             |
| 48 P59 | 0.             | 2.9802321E-08  | 0.             |
| 49 P60 | 0.             | 1.2371134E 00  | 0.             |
| 50 P62 | 0.             | 0.             | 0.             |



| GIRGIM | P124           | P125          | P126           |
|--------|----------------|---------------|----------------|
| 51 P63 | 0.             | 0.            | 0.             |
| 52 P64 | 0.             | 0.            | 0.             |
| 53 P67 | 0.             | 0.            | 0.             |
| 54 P68 | 0.             | 0.            | 0.             |
| 55 P69 | 0.             | 0.            | 0.             |
| 56 P72 | 0.             | 0.            | 0.             |
| 57 P73 | 0.             | 0.            | 0.             |
| 58 P74 | 0.             | 0.            | 0.             |
| 59 P77 | 0.             | 0.            | 0.             |
| 60 P79 | 0.             | 0.            | 0.             |
| 61 P80 | 0.             | 0.            | 0.             |
| 62 P81 | 0.             | 0.            | 0.             |
| 63 P82 | -3.7252903E-09 | 0.            | -1.8626451E-09 |
| 64 P83 | 0.             | 0.            | 0.             |
| 65 P84 | 0.             | 0.            | 0.             |
| 66 P93 | 0.             | 0.            | 0.             |
| 67 P94 | 0.             | 0.            | 0.             |
| 68 P95 | 0.             | 0.            | 0.             |
| 69 P96 | 9.9999998E-01  | 0.            | 5.0000000E-01  |
| 70 P97 | 0.             | 4.9999999E-01 | 0.             |
| 71 Q19 | 0.             | 0.            | 0.             |
| 72 Q20 | 0.             | 0.            | 0.             |
| 73 Q21 | 0.             | 0.            | 0.             |
| 74 Q22 | 0.             | 0.            | 0.             |
| 75 Q23 | 0.             | 0.            | 0.             |
| 76 Q24 | 0.             | 0.            | 0.             |
| 77 Q26 | 0.             | 0.            | 0.             |
| 78 Q28 | 0.             | 0.            | 0.             |

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| TRIPLE | Q19            | Q20            | Q21            | Q22            |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 1.3841954E-01  | -7.6711162E-02 | 2.8159541E-02  | -1.4635880E-01 |
| Q20    | -7.6711162E-02 | 6.7895034E-02  | -3.3136692E-02 | 7.7945036E-02  |
| Q21    | 2.8159541E-02  | -3.3136692E-02 | 7.8052418E-02  | 1.6106231E-02  |
| Q22    | -1.4635880E-01 | 7.7945036E-02  | 1.6106231E-02  | 2.3438850E-01  |
| Q23    | 1.6820861E-02  | -2.0842521E-02 | 3.6251713E-02  | -1.6655647E-03 |
| Q24    | -1.2568759E-01 | 5.9579546E-02  | 1.1260117E-02  | 1.9038370E-01  |
| Q26    | -1.0838410E-01 | 4.6793160E-02  | 1.1868887E-02  | 1.6217216E-01  |
| Q28    | -1.5859769E-02 | 3.7079507E-03  | 3.3377697E-03  | 2.2134576E-02  |
| P100   | 5.6052397E-03  | -1.7777088E-03 | -8.0913655E-03 | -1.6707642E-02 |
| P101   | -2.7253432E-03 | 1.8299268E-03  | -2.5669138E-03 | 6.0835913E-04  |
| P102   | -1.0433591E-02 | 5.1680544E-03  | 2.5448343E-03  | 1.6630771E-02  |
| P103   | 6.7300639E-03  | -2.0929752E-03 | -5.0536649E-03 | -1.3600716E-02 |
| P104   | -1.0037348E-03 | 6.7611247E-04  | -1.5100896E-03 | -4.7239376E-06 |
| P105   | -8.4605839E-03 | 3.3391081E-03  | 1.8806397E-03  | 1.3147937E-02  |
| P106   | 6.4050262E-03  | -2.1837111E-03 | -2.2750207E-03 | -1.0531030E-02 |
| P107   | -1.5773244E-04 | 6.3543249E-05  | -5.2537091E-04 | -2.9043465E-04 |
| P108   | -6.6100774E-03 | 2.2730211E-03  | 1.2106549E-03  | 9.7569809E-03  |
| P109   | 5.3740410E-03  | -1.8756489E-03 | -9.2758615E-04 | -7.9369228E-03 |
| P110   | 1.6823348E-04  | -1.2328455E-04 | -9.7866324E-05 | -3.9321320E-04 |
| P111   | -4.9791192E-03 | 1.5720005E-03  | 7.8758979E-04  | 7.0907841E-03  |
| P112   | 4.7593825E-03  | -1.3868972E-03 | -8.0291315E-04 | -6.7347545E-03 |
| P113   | 4.1034942E-03  | -1.2325807E-03 | -6.5943825E-04 | -5.8134158E-03 |
| P114   | 3.9640057E-04  | -2.0470214E-04 | 1.1374499E-06  | -5.9442869E-04 |
| P115   | -3.5227168E-03 | 1.0017815E-03  | 5.5840352E-04  | 4.9075648E-03  |
| P116   | 2.4264615E-03  | -6.5241561E-04 | -3.8066871E-04 | -3.3526256E-03 |
| P117   | -2.1930116E-03 | 5.6618376E-04  | 3.4085126E-04  | 2.9912639E-03  |
| P118   | 1.1117728E-03  | -2.6449094E-04 | -1.7024159E-04 | -1.4978568E-03 |
| P119   | 1.2158958E-03  | -2.9859493E-04 | -1.8731728E-04 | -1.6485109E-03 |
| P120   | 4.9126962E-05  | -1.7017120E-05 | -8.2231998E-06 | -7.5477223E-05 |
| P121   | 3.0256584E-05  | -7.3638923E-06 | -4.6517974E-06 | -4.0862692E-05 |
| P122   | -1.1762647E-03 | 2.8122551E-04  | 1.8017459E-04  | 1.5794618E-03  |
| P123   | 4.7457548E-04  | -1.1031431E-04 | -7.2356231E-05 | -6.3650535E-04 |
| P124   | -4.7314311E-04 | 1.0735617E-04  | 7.1794202E-05  | 6.2891898E-04  |
| P125   | -9.8740035E-05 | 2.3029743E-05  | 1.5063848E-05  | 1.3251756E-04  |
| P126   | 1.0378209E-04  | -2.4343199E-05 | -1.5841507E-05 | -1.3883456E-04 |

| TRIPLE | Q23            | Q24            | Q26            | Q28            |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 1.6820861E-02  | -1.2568759E-01 | -1.0838410E-01 | -1.5859769E-02 |
| Q20    | -2.0842521E-02 | 5.9579546E-02  | 4.6793160E-02  | 3.7079507E-03  |
| Q21    | 3.6251713E-02  | 1.1260117E-02  | 1.1868887E-02  | 3.3377697E-03  |
| Q22    | -1.6655647E-03 | 1.9038370E-01  | 1.6217216E-01  | 2.2134576E-02  |
| Q23    | 3.8093863E-02  | -9.9936633E-04 | -1.4044287E-03 | 1.5195177E-03  |
| Q24    | -9.9936633E-04 | 1.8158340E-01  | 1.4964749E-01  | 2.0460355E-02  |
| Q26    | -1.4044287E-03 | 1.4964749E-01  | 1.4961211E-01  | 1.9669853E-02  |
| Q28    | 1.5195177E-03  | 2.0460355E-02  | 1.9669853E-02  | 1.3235990E-02  |
| P100   | -3.4454395E-03 | -1.4367632E-02 | -1.2789402E-02 | -1.8023314E-03 |
| P101   | -1.1878696E-03 | 3.3643725E-04  | 3.7705906E-05  | 2.1728277E-04  |
| P102   | 9.0104887E-04  | 1.3942042E-02  | 1.1906566E-02  | 2.0860218E-03  |
| P103   | -2.3552042E-03 | -1.2029806E-02 | -1.0858133E-02 | -1.7024173E-03 |
| P104   | -8.0415567E-04 | -6.6619258E-05 | -2.3807020E-04 | 8.4450406E-05  |
| P105   | 6.9082130E-04  | 1.1481045E-02  | 1.0012627E-02  | 1.8095150E-03  |
| P106   | -1.2649706E-03 | -9.6921793E-03 | -8.9270562E-03 | -1.6025456E-03 |
| P107   | -3.6836944E-04 | -2.7362021E-04 | -3.3113454E-04 | -2.1397965E-05 |
| P108   | 4.8056053E-04  | 9.0196923E-03  | 8.1183615E-03  | 1.5329486E-03  |
| P109   | -2.8712275E-04 | -7.3546375E-03 | -6.9953127E-03 | -1.5025651E-03 |
| P110   | -6.4273127E-05 | -3.4050920E-04 | -3.8604729E-04 | -1.2277839E-04 |
| P111   | 2.5087836E-04  | 6.5763244E-03  | 6.2235558E-03  | 1.2562828E-03  |
| P112   | -2.5572290E-04 | -6.2386771E-03 | -5.9474860E-03 | -1.6786680E-03 |
| P113   | -1.8784881E-04 | -5.3872695E-03 | -5.1277870E-03 | -1.4025396E-03 |
| P114   | 5.6216298E-05  | -5.5415637E-04 | -4.8360910E-04 | -1.5588735E-04 |
| P115   | 1.8473908E-04  | 4.5503132E-03  | 4.3002959E-03  | 9.7966058E-04  |
| P116   | -1.0645822E-04 | -3.1063963E-03 | -2.9556459E-03 | -8.7783562E-04 |
| P117   | 1.1230695E-04  | 2.7732945E-03  | 2.6187201E-03  | 6.5586947E-04  |
| P118   | -4.6696187E-05 | -1.3876322E-03 | -1.3197704E-03 | -2.7482745E-04 |
| P119   | -5.1633659E-05 | -1.5272602E-03 | -1.4527148E-03 | -4.1411322E-04 |
| P120   | 2.4010727E-06  | -6.9443374E-05 | -7.1512904E-05 | -4.6282480E-05 |
| P121   | -1.4020214E-06 | -3.7869760E-05 | -3.5884048E-05 | -1.0272816E-05 |
| P122   | 5.9182938E-05  | 1.4642819E-03  | 1.3817910E-03  | 3.6976658E-04  |
| P123   | -1.9776520E-05 | -5.8964938E-04 | -5.6077257E-04 | -1.6871590E-04 |
| P124   | 2.3535048E-05  | 5.8303341E-04  | 5.4995944E-04  | 1.5335028E-04  |
| P125   | 4.1193985E-06  | 1.2276286E-04  | 1.1675203E-04  | 3.1475274E-05  |
| P126   | -5.1996722E-06 | -1.2870843E-04 | -1.2143898E-04 | -3.3000342E-05 |

| TRIPLE | P100           | P101           | P102           | P103           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 5.6052397E-03  | -2.7253432E-03 | -1.0433591E-02 | 6.7300639E-03  |
| Q20    | -1.7777088E-03 | 1.8299268E-03  | 5.1680544E-03  | -2.0929752E-03 |
| Q21    | -8.0913655E-03 | -2.5669138E-03 | 2.5448343E-03  | -5.0536649E-03 |
| Q22    | -1.6707642E-02 | 6.0835913E-04  | 1.6630771E-02  | -1.3600716E-02 |
| Q23    | -3.4454395E-03 | -1.1878696E-03 | 9.0104887E-04  | -2.3552042E-03 |
| Q24    | -1.4367632E-02 | 3.3643725E-04  | 1.3942042E-02  | -1.2029806E-02 |
| Q26    | -1.2789402E-02 | 3.7705906E-05  | 1.1906566E-02  | -1.0858133E-02 |
| Q28    | -1.8023314E-03 | 2.1728277E-04  | 2.0860218E-03  | -1.7024173E-03 |
| P100   | 3.8601123E-03  | 2.0777291E-03  | 4.2849864E-04  | 2.8233782E-03  |
| P101   | 2.0777291E-03  | 1.9664134E-03  | 1.8634136E-03  | 1.5238370E-03  |
| P102   | 4.2849864E-04  | 1.8634136E-03  | 3.1911335E-03  | 3.2137786E-04  |
| P103   | 2.8233782E-03  | 1.5238370E-03  | 3.2137786E-04  | 2.2462130E-03  |
| P104   | 1.5736603E-03  | 1.4966455E-03  | 1.4253841E-03  | 1.2433615E-03  |
| P105   | 3.7167870E-04  | 1.4745340E-03  | 2.4950007E-03  | 2.7876290E-04  |
| P106   | 2.0048365E-03  | 1.0748114E-03  | 2.1426368E-04  | 1.6769663E-03  |
| P107   | 1.1507027E-03  | 1.1076098E-03  | 1.0677361E-03  | 9.4881412E-04  |
| P108   | 3.1487113E-04  | 1.1435723E-03  | 1.9103654E-03  | 2.3615676E-04  |
| P109   | 1.3969188E-03  | 7.2700242E-04  | 1.0713210E-04  | 1.2091204E-03  |
| P110   | 8.2667998E-04  | 7.9611555E-04  | 7.6783442E-04  | 7.0064421E-04  |
| P111   | 2.5804325E-04  | 8.6653880E-04  | 1.4295767E-03  | 1.9353531E-04  |
| P112   | 1.0330107E-03  | 4.4537164E-04  | -9.8367919E-05 | 9.2166831E-04  |
| P113   | 9.6940616E-04  | 4.6589866E-04  | 5.6330414E-09  | 8.6113582E-04  |
| P114   | 5.9677411E-04  | 5.5372476E-04  | 5.1389139E-04  | 5.1462764E-04  |
| P115   | 2.0122437E-04  | 6.1051122E-04  | 1.0277282E-03  | 1.5092057E-04  |
| P116   | 5.6944387E-04  | 2.7367593E-04  | 3.3086538E-09  | 5.1391071E-04  |
| P117   | 1.3471695E-04  | 4.0049376E-04  | 6.4641574E-04  | 1.0103927E-04  |
| P118   | 2.5920786E-04  | 1.2457585E-04  | 1.5059158E-09  | 2.3758818E-04  |
| P119   | 2.8344573E-04  | 1.3464492E-04  | 1.6496842E-09  | 2.5926465E-04  |
| P120   | 1.8466002E-04  | 1.7832864E-04  | 1.7247024E-04  | 1.6236827E-04  |
| P121   | 2.6841782E-06  | -9.7784258E-07 | -4.3662924E-06 | 2.6025747E-06  |
| P122   | 7.5950810E-05  | 2.1793126E-04  | 3.4930508E-04  | 5.6963995E-05  |
| P123   | 1.1051842E-04  | 5.3115388E-05  | 6.4205162E-10  | 1.0157713E-04  |
| P124   | 3.1498458E-05  | 8.8461598E-05  | 1.4116931E-04  | 2.3624214E-05  |
| P125   | -2.2998279E-05 | -1.1053022E-05 | -1.3360352E-10 | -2.1129317E-05 |
| P126   | -6.7783372E-06 | -1.9293304E-05 | -3.0873342E-05 | -5.0838323E-06 |

| TRIFLE | P104           | P105           | P106           | P107           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | -1.0037348E-03 | -8.4605839E-03 | 6.4050262E-03  | -1.5773244E-04 |
| Q20    | 6.7611247E-04  | 3.3391081E-03  | -2.1837111E-03 | 6.3543249E-05  |
| Q21    | -1.5100896E-03 | 1.8806397E-03  | -2.2750207E-03 | -5.2537091E-04 |
| Q22    | -4.7239376E-06 | 1.3147937E-02  | -1.0531030E-02 | -2.9043465E-04 |
| Q23    | -8.0415567E-04 | 6.9082130E-04  | -1.2649706E-03 | -3.6836944E-04 |
| Q24    | -6.6619258E-05 | 1.1481045E-02  | -9.6921793E-03 | -2.7362021E-04 |
| Q26    | -2.3807020E-04 | 1.0012627E-02  | -8.9270562E-03 | -3.3113454E-04 |
| Q28    | 8.4450406E-05  | 1.8095150E-03  | -1.6025456E-03 | -2.1397965E-05 |
| P100   | 1.5736603E-03  | 3.7167870E-04  | 2.0048365E-03  | 1.1507027E-03  |
| P101   | 1.4966455E-03  | 1.4745340E-03  | 1.0748114E-03  | 1.1076098E-03  |
| P102   | 1.4253841E-03  | 2.4950007E-03  | 2.1426368E-04  | 1.0677361E-03  |
| P103   | 1.2433615E-03  | 2.7876290E-04  | 1.6769663E-03  | 9.4881412E-04  |
| P104   | 1.2196349E-03  | 1.1817598E-03  | 9.1694880E-04  | 9.2574137E-04  |
| P105   | 1.1817598E-03  | 2.0566722E-03  | 1.8585154E-04  | 9.0602796E-04  |
| P106   | 9.1694880E-04  | 1.8585154E-04  | 1.3491256E-03  | 7.4694198E-04  |
| P107   | 9.2574137E-04  | 9.0602796E-04  | 7.4694198E-04  | 7.5535986E-04  |
| P108   | 9.3749330E-04  | 1.6170715E-03  | 1.5744597E-04  | 7.4430299E-04  |
| P109   | 6.4026272E-04  | 9.2923998E-05  | 1.0213462E-03  | 5.4509332E-04  |
| P110   | 6.7901079E-04  | 6.6000491E-04  | 5.7462193E-04  | 5.6234452E-04  |
| P111   | 7.1888388E-04  | 1.2279800E-03  | 1.2903021E-04  | 5.8053300E-04  |
| P112   | 4.0869790E-04  | -8.5333812E-05 | 8.1034620E-04  | 3.6464804E-04  |
| P113   | 4.2236775E-04  | 0.             | 7.5288424E-04  | 3.7260234E-04  |
| P114   | 4.7891654E-04  | 4.4576874E-04  | 4.3249171E-04  | 4.0414656E-04  |
| P115   | 5.2700816E-04  | 8.9149508E-04  | 1.0061891E-04  | 4.2999114E-04  |
| P116   | 2.5206165E-04  | 0.             | 4.5838931E-04  | 2.2685682E-04  |
| P117   | 3.3695799E-04  | 5.6561725E-04  | 6.7362995E-05  | 2.7739308E-04  |
| P118   | 1.1653166E-04  | 0.             | 2.1597418E-04  | 1.0688560E-04  |
| P119   | 1.2716348E-04  | 0.             | 2.3458971E-04  | 1.1609842E-04  |
| P120   | 1.5679343E-04  | 1.5184543E-04  | 1.4008006E-04  | 1.3538179E-04  |
| P121   | -6.7679820E-07 | -3.8641882E-06 | 2.5210397E-06  | -4.2464592E-07 |
| P122   | 1.8420376E-04  | 3.0753505E-04  | 3.7977959E-05  | 1.5257995E-04  |
| P123   | 4.9821298E-05  | 0.             | 9.2638285E-05  | 4.5846679E-05  |
| P124   | 7.4985111E-05  | 1.2477008E-04  | 1.5750290E-05  | 6.2348102E-05  |
| P125   | -1.0363455E-05 | 0.             | -1.9260864E-05 | -9.5322001E-06 |
| P126   | -1.6324859E-05 | -2.7220732E-05 | -3.3893968E-06 | -1.3541476E-05 |

| TRIPLE | P108           | P109           | P110           | P111           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | -6.6100774E-03 | 5.3740410E-03  | 1.6823348E-04  | -4.9791192E-03 |
| Q20    | 2.2730211E-03  | -1.8756489E-03 | -1.2328455E-04 | 1.5720005E-03  |
| Q21    | 1.2106549E-03  | -9.2758615E-04 | -9.7866324E-05 | 7.8758979E-04  |
| Q22    | 9.7569809E-03  | -7.9369228E-03 | -3.9321320E-04 | 7.0907861E-03  |
| Q23    | 4.8056053E-04  | -2.8712275E-04 | -6.4273127E-05 | 2.5087836E-04  |
| Q24    | 9.0196923E-03  | -7.3546375E-03 | -3.4050920E-04 | 6.5763244E-03  |
| Q26    | 8.1183615E-03  | -6.9953127E-03 | -3.8604729E-04 | 6.2235558E-03  |
| Q28    | 1.5329486E-03  | -1.5025651E-03 | -1.2277839E-04 | 1.2562828E-03  |
| P100   | 3.1487113E-04  | 1.3969188E-03  | 8.2667998E-04  | 2.5804325E-04  |
| P101   | 1.1435723E-03  | 7.2700242E-04  | 7.9611555E-04  | 8.6653880E-04  |
| P102   | 1.9103654E-03  | 1.0713210E-04  | 7.6783442E-04  | 1.4295767E-03  |
| P103   | 2.3615676E-04  | 1.2091234E-03  | 7.0064421E-04  | 1.9353531E-04  |
| P104   | 9.3749330E-04  | 6.4026272E-04  | 6.7901079E-04  | 7.1888388E-04  |
| P105   | 1.6170715E-03  | 9.2923998E-05  | 6.6000491E-04  | 1.2279800E-03  |
| P106   | 1.5744597E-04  | 1.0213462E-03  | 5.7462193E-04  | 1.2903021E-04  |
| P107   | 7.4430299E-04  | 5.4509332E-04  | 5.6234452E-04  | 5.8053300E-04  |
| P108   | 1.3237385E-03  | 7.8721486E-05  | 5.5216258E-04  | 1.0263521E-03  |
| P109   | 7.8721486E-05  | 8.3349718E-04  | 4.4855667E-04  | 6.4513874E-05  |
| P110   | 5.5216258E-04  | 4.4855667E-04  | 4.5432026E-04  | 4.4428421E-04  |
| P111   | 1.0263521E-03  | 6.4513874E-05  | 4.4428421E-04  | 8.2465721E-04  |
| P112   | -7.2291386E-05 | 6.9896634E-04  | 3.1952150E-04  | -5.9244274E-05 |
| P113   | 0.             | 6.4457881E-04  | 3.2195851E-04  | 0.             |
| P114   | 3.7763741E-04  | 3.5032398E-04  | 3.2962229E-04  | 3.0948161E-04  |
| P115   | 7.5523892E-04  | 5.0308496E-05  | 3.3439401E-04  | 6.1893379E-04  |
| P116   | 0.             | 4.0283557E-04  | 2.0121099E-04  | 0.             |
| P117   | 4.84803E-04    | 3.3680856E-05  | 2.1867141E-04  | 4.0395930E-04  |
| P118   | 0.             | 1.9434515E-04  | 9.7072811E-05  | 0.             |
| P119   | 0.             | 2.0989838E-04  | 1.0484144E-04  | 0.             |
| P120   | 1.3121744E-04  | 1.1778175E-04  | 1.1408496E-04  | 1.1058194E-04  |
| P121   | -3.3219604E-06 | 2.4393366E-06  | -1.8043339E-07 | -2.7995200E-06 |
| P122   | 2.6575684E-04  | 1.8988618E-05  | 1.2139252E-04  | 2.2396160E-04  |
| P123   | 0.             | 8.3693006E-05  | 4.1803539E-05  | 0.             |
| P124   | 1.0636750E-04  | 7.8749948E-06  | 4.9882544E-05  | 9.1957995E-05  |
| P125   | 0.             | -1.7391074E-05 | -8.6866089E-06 | 0.             |
| P126   | -4.3567395E-05 | -1.6946661E-06 | -1.0796262E-05 | -1.9912549E-05 |

| TRIPLE | P112           | P113           | P114           | P115           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 4.7593825E-03  | 4.1034942E-03  | 3.9640057E-04  | -3.5227168E-03 |
| Q20    | -1.3868972E-03 | -1.2925807E-03 | -2.0470214E-04 | 1.0017815E-03  |
| Q21    | -8.0291315E-04 | -6.5943825E-04 | 1.1374499E-06  | 5.5840352E-04  |
| Q22    | -6.7347545E-03 | -5.8134158E-03 | -5.9442869E-04 | 4.9075648E-03  |
| Q23    | -2.5572290E-04 | -1.8784881E-04 | 5.6216298E-05  | 1.8473908E-04  |
| Q24    | -6.2386771E-03 | -5.3872695E-03 | -5.5415637E-04 | 4.5503132E-03  |
| Q26    | -5.9474860E-03 | -5.1277870E-03 | -4.8360910E-04 | 4.3002959E-03  |
| Q28    | -1.6786680E-03 | -1.4025396E-03 | -1.5588735E-04 | 9.7966058E-04  |
| P100   | 1.0330107E-03  | 9.6940616E-04  | 5.9677411E-04  | 2.0122437E-04  |
| P101   | 4.4537164E-04  | 4.6589866E-04  | 5.5372476E-04  | 6.3051122E-04  |
| P102   | -9.8367919E-05 | 5.6330414E-09  | 5.1387139E-04  | 1.0277282E-03  |
| P103   | 9.2166831E-04  | 8.6113582E-04  | 5.1462764E-04  | 1.5092057E-04  |
| P104   | 4.0869790E-04  | 4.2236775E-04  | 4.7891654E-04  | 5.2700816E-04  |
| P105   | -8.5333812E-05 | 0.             | 4.4576874E-04  | 8.9149508E-04  |
| P106   | 8.1034620E-04  | 7.5288424E-04  | 4.3249171E-04  | 1.0061891E-04  |
| P107   | 3.6464804E-04  | 3.7260234E-04  | 4.0414656E-04  | 4.2999114E-04  |
| P108   | -7.2291386E-05 | 0.             | 3.7763741E-04  | 7.5523892E-04  |
| P109   | 6.9896634E-04  | 6.4457881E-04  | 3.5032398E-04  | 5.0308496E-05  |
| P110   | 3.1952150E-04  | 3.2195851E-04  | 3.2962229E-04  | 3.3439401E-04  |
| P111   | -5.9244274E-05 | 0.             | 3.0948161E-04  | 6.1893379E-04  |
| P112   | 6.5048452E-04  | 5.8757031E-04  | 2.6808586E-04  | -4.6199216E-05 |
| P113   | 5.8757031E-04  | 5.3625886E-04  | 2.6815006E-04  | 0.             |
| P114   | 2.6808586E-04  | 2.6815006E-04  | 2.6705711E-04  | 2.4133653E-04  |
| P115   | -4.6199216E-05 | 0.             | 2.4133653E-04  | 4.8265011E-04  |
| P116   | 3.8050028E-04  | 3.4727189E-04  | 1.7364930E-04  | 0.             |
| P117   | -3.0929747E-05 | 0.             | 1.6157153E-04  | 3.2312770E-04  |
| P118   | 1.8923664E-04  | 1.7271095E-04  | 8.6362116E-05  | 0.             |
| P119   | 2.0292241E-04  | 1.8520156E-04  | 9.2607905E-05  | 0.             |
| P120   | 9.6007161E-05  | 9.5480965E-05  | 9.2720295E-05  | 8.9948004E-05  |
| P121   | 2.8011052E-06  | 2.3575547E-06  | 4.0231599E-08  | -2.2771646E-06 |
| P122   | -1.7437596E-05 | 0.             | 9.1090916E-05  | 1.8217317E-04  |
| P123   | 8.1897424E-05  | 7.4745472E-05  | 3.7375610E-05  | 0.             |
| P124   | -7.2317523E-06 | 0.             | 3.7777394E-05  | 7.5551196E-05  |
| P125   | -1.7005910E-05 | -1.5520814E-05 | -7.7610042E-06 | 0.             |
| P126   | 1.5562429E-06  | 0.             | -8.1295377E-06 | -1.6258302E-05 |

| TRIPLE | P116           | P117           | P118           | P119           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 2.4264615E-03  | -2.1930116E-03 | 1.1117728E-03  | 1.2158958E-03  |
| Q20    | -6.5241561E-04 | 5.6618376E-04  | -2.6449094E-04 | -2.9859493E-04 |
| Q21    | -3.8066871E-04 | 3.4085126E-04  | -1.7024159E-04 | -1.8731728E-04 |
| Q22    | -3.3526256E-03 | 2.7912639E-03  | -1.4978568E-03 | -1.6485109E-03 |
| Q23    | -1.0645822E-04 | 1.1230675E-04  | -4.6646187E-05 | -5.1633659E-05 |
| Q24    | -3.1063963E-03 | 2.7732945E-03  | -1.3876322E-03 | -1.5272602E-03 |
| Q26    | -2.9556459E-03 | 2.6187201E-03  | -1.3197704E-03 | -1.4527148E-03 |
| Q28    | -8.7783562E-04 | 6.5586947E-04  | -2.7482745E-04 | -4.1411322E-04 |
| P100   | 5.6944387E-04  | 1.3471675E-04  | 2.5920781E-04  | 2.8394573E-04  |
| P101   | 2.7367593E-04  | 4.0049376E-04  | 1.2457585E-04  | 1.3646492E-04  |
| P102   | 3.3086538E-04  | 6.4641574E-04  | 1.5059158E-04  | 1.6496842E-04  |
| P103   | 5.1391071E-04  | 1.0103927E-04  | 2.3758818E-04  | 2.5926465E-04  |
| P104   | 2.5206165E-04  | 3.3695799E-04  | 1.1653166E-04  | 1.2716348E-04  |
| P105   | 0.             | 5.6561725E-04  | 0.             | 0.             |
| P106   | 4.5838931E-04  | 6.7362995E-05  | 2.1597418E-04  | 2.3458971E-04  |
| P107   | 2.2685682E-04  | 2.7739308E-04  | 1.0688560E-04  | 1.1609842E-04  |
| P108   | 0.             | 4.8480387E-04  | 0.             | 0.             |
| P109   | 4.0283557E-04  | 3.3680856E-05  | 1.9434515E-04  | 2.0989838E-04  |
| P110   | 2.0121049E-04  | 2.1867141E-04  | 9.7072811E-05  | 1.0484144E-04  |
| P111   | 0.             | 4.0395930E-04  | 0.             | 0.             |
| P112   | 3.8050028E-04  | -3.0929747E-05 | 1.8923664E-04  | 2.0292241E-04  |
| P113   | 3.4727189E-04  | 0.             | 1.7271095E-04  | 1.8520156E-04  |
| P114   | 1.7364930E-04  | 1.6157153E-04  | 8.6362116E-05  | 9.2607905E-05  |
| P115   | 0.             | 3.2312770E-04  | 0.             | 0.             |
| P116   | 2.4202568E-04  | 0.             | 1.2725204E-04  | 1.3473624E-04  |
| P117   | 0.             | 2.3042041E-04  | 0.             | 0.             |
| P118   | 1.2725204E-04  | 0.             | 8.6672852E-05  | 8.1790708E-05  |
| P119   | 1.3473624E-04  | 0.             | 8.1790708E-05  | 8.4268230E-05  |
| P120   | 6.9242423E-05  | 6.6284769E-05  | 4.0733216E-05  | 4.3002485E-05  |
| P121   | 1.7096889E-06  | -1.6780954E-06 | 1.0057584E-06  | 1.0617898E-06  |
| P122   | 0.             | 1.3424763E-04  | 0.             | 0.             |
| P123   | 5.5548335E-05  | 0.             | 3.5247932E-05  | 3.6350178E-05  |
| P124   | 0.             | 5.6735505E-05  | 0.             | 0.             |
| P125   | -1.1920422E-05 | 0.             | -7.5207775E-06 | -7.5198174E-06 |
| P126   | 0.             | -1.2067439E-05 | 0.             | 0.             |



| TRIPLE | P120           | P121           | P122           | P123           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 4.9126962E-05  | 3.0256584E-05  | -1.1762647E-03 | 4.7457548E-04  |
| Q20    | -1.7012120E-05 | -7.3638923E-06 | 2.8122551E-04  | -1.1031431E-04 |
| Q21    | -8.2231998E-06 | -4.6517974E-06 | 1.8017459E-04  | -7.2356231E-05 |
| Q22    | -7.5477223E-05 | -4.0862692E-05 | 1.5794618E-03  | -6.3650535E-04 |
| Q23    | 2.4010727E-06  | -1.4020214E-06 | 5.2182938E-05  | -1.9776520E-05 |
| Q24    | -6.2443374E-05 | -3.7869760E-05 | 1.46642819E-03 | -5.8964938E-04 |
| Q26    | -7.1512904E-05 | -3.5844048E-05 | 1.3817910E-03  | -5.6077257E-04 |
| Q28    | -4.6282480E-05 | -1.0272816E-05 | 3.6976658E-04  | -1.6871590E-04 |
| P100   | 1.8466002E-04  | 2.6841782E-06  | 7.5950810E-05  | 1.1051842E-04  |
| P101   | 1.7832864E-04  | -9.7784258E-07 | 2.1793126E-04  | 5.3115388E-05  |
| P102   | 1.7247024E-04  | -4.3662924E-06 | 3.4930502E-04  | 6.4205162E-10  |
| P103   | 1.6236827E-04  | 2.6025747E-06  | 5.6963995E-05  | 1.0157713E-04  |
| P104   | 1.5679343E-04  | -6.7679820E-07 | 1.8420376E-04  | 4.9821296E-05  |
| P105   | 1.5184543E-04  | -3.8441882E-06 | 3.0753505E-04  | 0.             |
| P106   | 1.4008006E-04  | 2.5210397E-06  | 3.7977959E-05  | 9.2638285E-05  |
| P107   | 1.3538179E-04  | -4.2464592E-07 | 1.5257995E-04  | 4.5846679E-05  |
| P108   | 1.3121744E-04  | -3.3219604E-06 | 2.6575684E-04  | 0.             |
| P109   | 1.1778175E-04  | 2.4393366E-06  | 1.8988618E-05  | 8.3693006E-05  |
| P110   | 1.1408496E-04  | -1.8043339E-07 | 1.2139252E-04  | 4.1803539E-05  |
| P111   | 1.1058104E-04  | -2.7995200E-06 | 2.2396160E-04  | 0.             |
| P112   | 9.6007161E-05  | 2.8011052E-06  | -1.7437596E-05 | 8.1897424E-05  |
| P113   | 9.5480965E-05  | 2.3575547E-06  | 0.             | 7.4745472E-05  |
| P114   | 9.2720295E-05  | 4.0231599E-08  | 9.1040916E-05  | 3.7375610E-05  |
| P115   | 8.2948004E-05  | -2.2771646E-06 | 1.8217317E-04  | 0.             |
| P116   | 6.2242423E-05  | 1.7096895E-06  | 0.             | 5.5548335E-05  |
| P117   | 6.6284769E-05  | -1.6780954E-06 | 1.3424763E-04  | 0.             |
| P118   | 4.0733216E-05  | 1.0057584E-06  | 0.             | 3.5247932E-05  |
| P119   | 4.3002485E-05  | 1.0617898E-06  | 0.             | 3.6350178E-05  |
| P120   | 4.3126710E-05  | 1.2504574E-06  | 4.2620336E-05  | 1.8554296E-05  |
| P121   | 1.2504574E-06  | 2.6950627E-08  | -1.0789958E-06 | 4.5813078E-07  |
| P122   | 4.2620336E-05  | -1.0784958E-06 | 8.6319667E-05  | 0.             |
| P123   | 1.8554296E-05  | 4.5813078E-07  | 0.             | 1.9015514E-05  |
| P124   | 1.8722438E-05  | -4.7398577E-07 | 3.7918863E-05  | 0.             |
| P125   | -3.8067752E-06 | -9.3994449E-08 | 0.             | -3.7599085E-06 |
| P126   | -3.8889539E-06 | 9.845428E-08   | -7.8763623E-06 | 0.             |

| TRIPLE | P124           | P125           | P126           |
|--------|----------------|----------------|----------------|
| Q19    | -4.731431E-04  | -9.8740035E-05 | 1.0378209E-04  |
| Q20    | 1.0735617E-04  | 2.3029743E-05  | -2.4343199E-05 |
| Q21    | 7.1794202E-05  | 1.5063848E-05  | -1.5841507E-05 |
| Q22    | 6.2891848E-04  | 1.3251756E-04  | -1.3883456E-04 |
| Q23    | 2.3535048E-05  | 4.1193985E-06  | -5.1996722E-06 |
| Q24    | 5.8303341E-04  | 1.2276286E-04  | -1.2870843E-04 |
| Q26    | 5.4975944E-04  | 1.1675203E-04  | -1.2143898E-04 |
| Q28    | 1.5335028E-04  | 3.1475274E-05  | -3.3000342E-05 |
| P100   | 3.1498458E-05  | -2.2998279E-05 | -6.7783372E-06 |
| P101   | 8.8461598E-05  | -1.1053022E-05 | -1.9293304E-05 |
| P102   | 1.4116931E-04  | -1.3360452E-10 | -3.0873342E-05 |
| P103   | 2.3624214E-05  | -2.1129317E-05 | -5.0838323E-06 |
| P104   | 7.4985111E-05  | -1.0363455E-05 | -1.6324859E-05 |
| P105   | 1.2477008E-04  | 0.             | -2.7220732E-05 |
| P106   | 1.5750290E-05  | -1.9260864E-05 | -3.3893968E-06 |
| P107   | 6.2348102E-05  | -9.5322001E-06 | -1.3541476E-05 |
| P108   | 1.0836750E-04  | 0.             | -2.3567395E-05 |
| P109   | 7.8749948E-06  | -1.7391074E-05 | -1.6946661E-06 |
| P110   | 4.9882544E-05  | -8.6866089E-06 | -1.0796262E-05 |
| P111   | 9.1957495E-05  | 0.             | -1.9912549E-05 |
| P112   | -7.2317523E-06 | -1.7005910E-05 | 1.5562429E-06  |
| P113   | 0.             | -1.5520814E-05 | 0.             |
| P114   | 3.7777394E-05  | -7.7610042E-06 | -8.1295377E-06 |
| P115   | 7.5551196E-05  | 0.             | -1.6258302E-05 |
| P116   | 0.             | -1.1520422E-05 | 0.             |
| P117   | 5.6735505E-05  | 0.             | -1.2067439E-05 |
| P118   | 0.             | -7.5207775E-06 | 0.             |
| P119   | 0.             | -7.5198174E-06 | 0.             |
| P120   | 1.8722418E-05  | -3.8067752E-06 | -3.8889539E-06 |
| P121   | -4.7398577E-07 | -9.3994449E-08 | 9.8454528E-08  |
| P122   | 3.7918863E-05  | 0.             | -7.8763623E-06 |
| P123   | 0.             | -3.7599085E-06 | 0.             |
| P124   | 2.0237640E-05  | 0.             | -3.9381811E-06 |
| P125   | 0.             | 3.2772292E-06  | 0.             |
| P126   | -3.9381811E-06 | 0.             | 3.5310873E-06  |

# PEDUNDANT SOLUTIONS

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| (GRN) | Q19            | Q20            | Q21            | Q22            |
|-------|----------------|----------------|----------------|----------------|
| P100  | 8.2879920E-02  | 4.1219183E-02  | 5.7830458E-02  | 5.0928614E-02  |
| P101  | 4.6015997E-02  | 9.6954275E-03  | 1.4316059E-02  | 3.5021521E-03  |
| P102  | 1.1905969E-02  | -1.9473350E-02 | -2.5947594E-02 | -4.0381324E-02 |
| P103  | 6.0209180E-03  | 2.6351346E-03  | 4.0346260E-02  | 2.0653345E-02  |
| P104  | 1.6908272E-02  | 1.3742524E-02  | 1.4418188E-02  | -4.1550868E-03 |
| P105  | 2.6542018E-02  | 2.5857877E-02  | -8.7529414E-03 | -3.0191906E-02 |
| P106  | -7.4498511E-03 | -8.5605562E-03 | 6.7051833E-03  | 5.9246576E-03  |
| P107  | 9.2367455E-03  | 1.0706719E-02  | 3.2546923E-03  | -2.0925184E-03 |
| P108  | 2.6102928E-02  | 2.9081636E-02  | -1.9504047E-03 | -7.8065072E-03 |
| P109  | -1.2754185E-02 | -1.4951364E-02 | 9.9798828E-04  | 2.8272421E-03  |
| P110  | 5.5593879E-03  | 5.9134668E-03  | -4.1268582E-04 | -4.9032791E-05 |
| P111  | 2.3922825E-02  | 2.6726595E-02  | -9.4275221E-04 | -3.8057803E-03 |
| P112  | -2.0774399E-02 | -2.3917029E-02 | 1.1306931E-03  | 3.4686863E-03  |
| P113  | -1.7161372E-02 | -1.9836767E-02 | 9.0516382E-04  | 2.9195223E-03  |
| P114  | 1.7994436E-03  | 1.6530990E-03  | -1.8089813E-06 | 1.2508820E-04  |
| P115  | 2.1386841E-02  | 2.3970670E-02  | -8.5250757E-04 | -3.2733371E-03 |
| P116  | -1.3554439E-02 | -1.5607811E-02 | 6.6414618E-04  | 2.1478380E-03  |
| P117  | 1.5748168E-02  | 1.7688571E-02  | -6.1165552E-04 | -2.3362769E-03 |
| P118  | -9.8084131E-03 | -1.1234666E-02 | 4.8566206E-04  | 1.4866357E-03  |
| P119  | -8.6595176E-03 | -9.9432070E-03 | 4.1671919E-04  | 1.3241350E-03  |
| P120  | 4.1494470E-04  | 3.6266889E-04  | 2.3848795E-05  | -2.8397731E-05 |
| P121  | -2.2180937E-04 | -2.5200114E-04 | 9.4705852E-06  | 3.3120591E-05  |
| P122  | 9.3982234E-03  | 1.0568714E-02  | -3.5970958E-04 | -1.3697822E-03 |
| P123  | -3.6143010E-03 | -4.1480320E-03 | 1.7057087E-04  | 5.4462035E-04  |
| P124  | 4.0245618E-03  | 4.5286780E-03  | -1.5281062E-04 | -5.8093160E-04 |
| P125  | 7.9798949E-04  | 9.1510496E-04  | -3.8313706E-05 | -1.2038043E-04 |
| P126  | -8.4909172E-04 | -9.5507562E-04 | 3.2398477E-05  | 1.2329454E-04  |

| (GRN) | Q23            | Q24            | Q26            | Q28            |
|-------|----------------|----------------|----------------|----------------|
| P100  | 2.5340486E-02  | 3.3241854E-02  | 3.8081646E-02  | 1.3292141E-02  |
| P101  | 4.1879508E-03  | 9.1679128E-03  | 1.7928718E-02  | -1.4757483E-02 |
| P102  | -1.5384390E-02 | -1.3107625E-02 | -7.1866589E-04 | -4.0711648E-02 |
| P103  | 2.4158448E-02  | 2.0745064E-02  | 2.8211350E-02  | 1.3617676E-02  |
| P104  | 8.1037221E-03  | 2.3357201E-03  | 1.1787864E-02  | -8.7162492E-03 |
| P105  | -8.0168837E-03 | -1.4593762E-02 | -3.8660761E-03 | -3.0229959E-02 |
| P106  | 2.6010192E-02  | 1.7133876E-02  | 2.9132629E-02  | 3.0182227E-02  |
| P107  | 8.5361874E-03  | 7.1223616E-04  | 6.9372647E-03  | -2.6764377E-05 |
| P108  | -6.5129972E-03 | -1.8028924E-02 | -1.3941442E-02 | -2.9804391E-02 |
| P109  | 3.3876549E-03  | 6.5895337E-03  | 2.6184539E-02  | 4.7959902E-02  |
| P110  | 2.6602527E-03  | -9.9976523E-04 | 4.7277402E-03  | 8.6811950E-03  |
| P111  | -1.4362103E-03 | -4.6493573E-03 | -1.9797868E-02 | -3.0360864E-02 |
| P112  | -4.6190906E-04 | 2.5268332E-03  | 1.5940920E-02  | 7.5005220E-02  |
| P113  | -9.1323767E-04 | 2.6976561E-03  | 1.4106559E-02  | 6.0818492E-02  |
| P114  | -1.6605360E-03 | 2.1991920E-03  | 4.3068565E-04  | 9.4129105E-03  |
| P115  | 2.0838690E-04  | -2.2195508E-03 | -1.1011674E-02 | -2.9643308E-02 |
| P116  | -1.6482747E-03 | 7.5843243E-04  | 6.3721620E-03  | 4.0240835E-02  |
| P117  | 9.4346511E-04  | -7.8341194E-04 | -5.2787862E-03 | -2.2628692E-02 |
| P118  | -1.0977896E-03 | -1.1942797E-04 | 2.9732676E-03  | 5.4417282E-03  |
| P119  | -1.1907832E-03 | 4.3545995E-05  | 2.7389471E-03  | 1.7375945E-02  |
| P120  | -2.0876113E-04 | -4.7481863E-05 | 2.6049190E-04  | 3.6440410E-03  |
| P121  | -2.5502691E-05 | 3.4285012E-06  | 6.1129614E-05  | 4.2995270E-04  |
| P122  | 8.2409765E-04  | -1.8633846E-04 | -2.2152570E-03 | -1.3769044E-02 |
| P123  | -5.5840257E-04 | -4.9323356E-05 | 8.8877196E-04  | 7.4437956E-03  |
| P124  | 4.1312392E-04  | -1.4925275E-05 | -7.3292341E-04 | -5.9573115E-03 |
| P125  | 1.1129376E-04  | 1.1566570E-05  | -2.0948357E-04 | -1.1865606E-03 |
| P126  | -7.9357772E-05 | 1.1552908E-05  | 1.8257543E-04  | 1.2489493E-03  |

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| (AMN) | P100           | P101           | P102           | P103           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 1.8566598E-03  | 1.7952248E-03  | 1.7383793E-03  | 1.4142737E-03  |
| P101  | 1.7952247E-03  | 1.8197076E-03  | 1.8423615E-03  | 1.4035543E-03  |
| P102  | 1.7383792E-03  | 1.8423615E-03  | 1.9385760E-03  | 1.3936356E-03  |
| P103  | 1.4142740E-03  | 1.4035543E-03  | 1.3936356E-03  | 1.1604595E-03  |
| P104  | 1.4002341E-03  | 1.4258847E-03  | 1.4496191E-03  | 1.1517003E-03  |
| P105  | 1.3909726E-03  | 1.4515154E-03  | 1.5075352E-03  | 1.1460223E-03  |
| P106  | 1.0622784E-03  | 1.0483666E-03  | 1.0354942E-03  | 8.9519473E-04  |
| P107  | 1.0637503E-03  | 1.0827570E-03  | 1.1003438E-03  | 8.9662803E-04  |
| P108  | 1.0691884E-03  | 1.1205768E-03  | 1.1681262E-03  | 9.0133621E-04  |
| P109  | 7.6902403E-04  | 7.4316134E-04  | 7.1923079E-04  | 6.5786837E-04  |
| P110  | 7.8057487E-04  | 7.9138317E-04  | 8.0138403E-04  | 6.6808307E-04  |
| P111  | 7.9550984E-04  | 8.4315170E-04  | 8.8723444E-04  | 6.8109322E-04  |
| P112  | 5.1820817E-04  | 4.7572764E-04  | 4.3642065E-04  | 4.4893401E-04  |
| P113  | 5.2673233E-04  | 4.9156120E-04  | 4.5901759E-04  | 4.5586379E-04  |
| P114  | 5.5349711E-04  | 5.5670033E-04  | 5.5966426E-04  | 4.7833987E-04  |
| P115  | 5.6550906E-04  | 6.0843578E-04  | 6.4815567E-04  | 4.8975487E-04  |
| P116  | 3.2071372E-04  | 2.9285414E-04  | 2.6707584E-04  | 2.7984847E-04  |
| P117  | 3.5182890E-04  | 3.8359201E-04  | 4.1298226E-04  | 3.0791334E-04  |
| P118  | 1.5309764E-04  | 1.3296463E-04  | 1.1433567E-04  | 1.3489111E-04  |
| P119  | 1.17162E-04    | 1.4691352E-04  | 1.3043856E-04  | 1.4464101E-04  |
| P120  | 1.7812483E-04  | 1.7881655E-04  | 1.7945659E-04  | 1.5669826E-04  |
| P121  | -2.5924828E-07 | -7.1146691E-07 | -1.1299024E-06 | -2.3800203E-07 |
| P122  | 1.8862439E-04  | 2.0763096E-04  | 2.2521763E-04  | 1.6633735E-04  |
| P123  | 6.5003487E-05  | 5.7566125E-05  | 5.0684377E-05  | 5.7250798E-05  |
| P124  | 7.5850605E-05  | 8.4001456E-05  | 9.1543396E-05  | 6.7211268E-05  |
| P125  | -1.3562758E-05 | -1.1922159E-05 | -1.0404121E-05 | -1.1949842E-05 |
| P126  | -1.6640576E-05 | -1.8358700E-05 | -1.9948471E-05 | -1.4700686E-05 |

| (AMN) | P104           | P105           | P106           | P107           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 1.4002341E-03  | 1.3909728E-03  | 1.0622783E-03  | 1.0637503E-03  |
| P101  | 1.4258847E-03  | 1.4515154E-03  | 1.0483666E-03  | 1.0827570E-03  |
| P102  | 1.4496191E-03  | 1.5075352E-03  | 1.0354942E-03  | 1.1003438E-03  |
| P103  | 1.1517003E-03  | 1.1460223E-03  | 8.9519473E-04  | 8.9662803E-04  |
| P104  | 1.1799921E-03  | 1.1917483E-03  | 8.8204076E-04  | 9.1023840E-04  |
| P105  | 1.1917483E-03  | 1.2385301E-03  | 8.7179668E-04  | 9.2572520E-04  |
| P106  | 8.8204076E-04  | 8.7179668E-04  | 7.3505197E-04  | 7.1776749E-04  |
| P107  | 9.1023840E-04  | 9.2572520E-04  | 7.1776749E-04  | 7.4784515E-04  |
| P108  | 9.4117808E-04  | 9.8201265E-04  | 7.0297499E-04  | 7.5791212E-04  |
| P109  | 6.3608862E-04  | 6.1691207E-04  | 5.6149960E-04  | 5.3206179E-04  |
| P110  | 6.7558717E-04  | 6.8469940E-04  | 5.4897985E-04  | 5.5961676E-04  |
| P111  | 7.1799747E-04  | 7.5547201E-04  | 5.3838741E-04  | 5.8906512E-04  |
| P112  | 4.1439773E-04  | 3.8232586E-04  | 4.0400136E-04  | 3.5739883E-04  |
| P113  | 4.2713312E-04  | 4.0068283E-04  | 4.0509275E-04  | 3.6635099E-04  |
| P114  | 4.8011141E-04  | 4.8315251E-04  | 4.0095031E-04  | 4.0359831E-04  |
| P115  | 5.2314959E-04  | 5.5671507E-04  | 3.8872352E-04  | 4.343568E-04   |
| P116  | 2.5725728E-04  | 2.3623838E-04  | 2.5488758E-04  | 2.2445884E-04  |
| P117  | 3.3268437E-04  | 3.5743098E-04  | 2.4538566E-04  | 2.7913196E-04  |
| P118  | 1.1868285E-04  | 1.0341827E-04  | 1.2820666E-04  | 1.0636798E-04  |
| P119  | 1.3026709E-04  | 1.1679990E-04  | 1.3473360E-04  | 1.1537695E-04  |
| P120  | 1.5700303E-04  | 1.5773003E-04  | 1.3474974E-04  | 1.3526076E-04  |
| P121  | -5.9696317E-07 | -9.4391328E-07 | 4.4607187E-08  | -4.4125323E-07 |
| P122  | 1.8118003E-04  | 1.9595850E-04  | 1.3294316E-04  | 1.5313151E-04  |
| P123  | 5.1253780E-05  | 4.5626348E-05  | 5.3744509E-05  | 4.5671011E-05  |
| P124  | 7.3581083E-05  | 7.9911950E-05  | 5.3815622E-05  | 6.2472141E-05  |
| P125  | -1.0627887E-05 | -9.3855351E-06 | -1.1274448E-05 | -9.4942336E-06 |
| P126  | -1.6042786E-05 | -1.7378153E-05 | -1.1757314E-05 | -1.3582175E-05 |

| (AMN) | P108           | P109           | P110           | P111           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 1.0691886E-03  | 7.6902392E-04  | 7.8057485E-04  | 7.9550995E-04  |
| P101  | 1.1205768E-03  | 7.4316134E-04  | 7.9138317E-04  | 8.4315170E-04  |
| P102  | 1.1681262E-03  | 7.1923079E-04  | 8.0138403E-04  | 8.8723444E-04  |
| P103  | 9.0133621E-04  | 6.5786837E-04  | 6.6808307E-04  | 6.8109322E-04  |
| P104  | 9.4117808E-04  | 6.3608862E-04  | 6.7558717E-04  | 7.1799747E-04  |
| P105  | 9.8201265E-04  | 6.1691207E-04  | 6.8469940E-04  | 7.5547201E-04  |
| P106  | 7.0297499E-04  | 5.6149960E-04  | 5.4897985E-04  | 5.3838741E-04  |
| P107  | 7.5791212E-04  | 5.3206179E-04  | 5.5961676E-04  | 5.8906512E-04  |
| P108  | 8.1415409E-04  | 5.0499557E-04  | 5.7182815E-04  | 6.4080241E-04  |
| P109  | 5.0499557E-04  | 4.6496565E-04  | 4.2858645E-04  | 3.9274523E-04  |
| P110  | 5.7182815E-04  | 4.2858645E-04  | 4.5186461E-04  | 4.5964863E-04  |
| P111  | 6.4080241E-04  | 3.9274523E-04  | 4.5964863E-04  | 5.2753742E-04  |
| P112  | 3.1284046E-04  | 3.6094104E-04  | 3.0130686E-04  | 2.4202096E-04  |
| P113  | 3.2957710E-04  | 3.5590646E-04  | 3.0650751E-04  | 2.5738945E-04  |
| P114  | 4.0768278E-04  | 3.2304872E-04  | 3.2770812E-04  | 3.3255786E-04  |
| P115  | 4.8062816E-04  | 2.8488797E-04  | 3.4504030E-04  | 4.0592976E-04  |
| P116  | 1.9534685E-04  | 2.3146048E-04  | 1.9239236E-04  | 1.5349217E-04  |
| P117  | 3.1322179E-04  | 1.8066348E-04  | 2.2514085E-04  | 2.7010984E-04  |
| P118  | 8.5265976E-05  | 1.2267488E-04  | 9.4470950E-05  | 6.6380113E-05  |
| P119  | 9.6755745E-05  | 1.2586900E-04  | 1.0091997E-04  | 7.6066127E-05  |
| P120  | 1.3622307E-04  | 1.1264623E-04  | 1.1360051E-04  | 1.1473702E-04  |
| P121  | -9.1992853E-07 | 3.5678355E-07  | -2.7654773E-07 | -9.1220603E-07 |
| P122  | 1.7348017E-04  | 9.8196503E-05  | 1.2480069E-04  | 1.5168136E-04  |
| P123  | 3.7895697E-05  | 5.0690088E-05  | 4.0271676E-05  | 2.9889829E-05  |
| P124  | 7.1186997E-05  | 3.9830929E-05  | 5.1237580E-05  | 6.2758728E-05  |
| P125  | -7.7774462E-06 | -1.0696805E-05 | -8.3986310E-06 | -6.1089106E-06 |
| P126  | -1.5420679E-05 | -8.6909465E-06 | -1.1095673E-05 | -1.3525060E-05 |

| (AMN) | P112           | P113           | P114           | P115           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 5.1820810E-04  | 5.2673225E-04  | 5.5349712E-04  | 5.6550906E-04  |
| P101  | 4.7572764E-04  | 4.9156120E-04  | 5.5670033E-04  | 6.0843578E-04  |
| P102  | 4.3642065E-04  | 4.5901759E-04  | 5.5966426E-04  | 6.4815567E-04  |
| P103  | 4.4893401E-04  | 4.5586379E-04  | 4.7833987E-04  | 4.8975487E-04  |
| P104  | 4.1439773E-04  | 4.2713312E-04  | 4.8011141E-04  | 5.2314959E-04  |
| P105  | 3.8232586E-04  | 4.0058283E-04  | 4.8315251E-04  | 5.5671507E-04  |
| P106  | 4.0400136E-04  | 4.0509275E-04  | 4.0095031E-04  | 3.8872352E-04  |
| P107  | 3.5739883E-04  | 3.6635099E-04  | 4.0359831E-04  | 4.3435068E-04  |
| P108  | 3.1284046E-04  | 3.2957710E-04  | 4.0768278E-04  | 4.8062816E-04  |
| P109  | 3.6094104E-04  | 3.5590646E-04  | 3.2304872E-04  | 2.8488797E-04  |
| P110  | 3.0130686E-04  | 3.0650751E-04  | 3.2770812E-04  | 3.4504030E-04  |
| P111  | 2.4202096E-04  | 2.5738945E-04  | 3.3255786E-04  | 4.0592976E-04  |
| P112  | 3.2414984E-04  | 3.1042642E-04  | 2.4185838E-04  | 1.7412053E-04  |
| P113  | 3.1042642E-04  | 3.0072117E-04  | 2.4582434E-04  | 1.8776605E-04  |
| P114  | 2.4185838E-04  | 2.4582434E-04  | 2.6436999E-04  | 2.5804028E-04  |
| P115  | 1.7412053E-04  | 1.8776605E-04  | 2.5804028E-04  | 3.2832856E-04  |
| P116  | 2.1287808E-04  | 2.0507427E-04  | 1.6032766E-04  | 1.1299549E-04  |
| P117  | 1.0974269E-04  | 1.1965437E-04  | 1.7214884E-04  | 2.2530522E-04  |
| P118  | 1.2194138E-04  | 1.1531820E-04  | 8.1608943E-05  | 4.8235273E-05  |
| P119  | 1.2082090E-04  | 1.1552445E-04  | 8.6299692E-05  | 5.6054054E-05  |
| P120  | 9.0334363E-05  | 9.0734385E-05  | 9.2147990E-05  | 9.3159031E-05  |
| P121  | 7.6408310E-07  | 6.2901902E-07  | -1.1570626E-07 | -8.8544080E-07 |
| P122  | 5.9389007E-05  | 6.5259120E-05  | 9.6834092E-05  | 1.2901938E-04  |
| P123  | 4.9312529E-05  | 4.7121370E-05  | 3.4874197E-05  | 2.2131522E-05  |
| P124  | 2.4023859E-05  | 2.6527213E-05  | 4.0105463E-05  | 5.3994739E-05  |
| P125  | -1.0498510E-05 | -9.9939543E-06 | -7.2743656E-06 | -4.4966025E-06 |
| P126  | -5.2509063E-06 | -5.7804023E-06 | -8.6377186E-06 | -1.1554219E-05 |



| (AMN) | P116           | P117           | P118           | P119           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 3.2071367E-04  | 3.5182892E-04  | 1.5309763E-04  | 1.6471860E-04  |
| P101  | 2.9285414E-04  | 3.8359201E-04  | 1.3296463E-04  | 1.4691352E-04  |
| P102  | 2.6707584E-04  | 4.1298226E-04  | 1.1433567E-04  | 1.3043856E-04  |
| P103  | 2.7984847E-04  | 3.0791334E-04  | 1.3489111E-04  | 1.4464101E-04  |
| P104  | 2.5725728E-04  | 3.3268437E-04  | 1.1868285E-04  | 1.3026709E-04  |
| P105  | 2.3623838E-04  | 3.5743098E-04  | 1.0341827E-04  | 1.1679990E-04  |
| P106  | 2.5488758E-04  | 2.4538566E-04  | 1.2820666E-04  | 1.3473360E-04  |
| P107  | 2.2445884E-04  | 2.7913196E-04  | 1.0636798E-04  | 1.1537695E-04  |
| P108  | 1.9534685E-04  | 3.1322179E-04  | 8.5265976E-05  | 9.6755745E-05  |
| P109  | 2.3146048E-04  | 1.8066348E-04  | 1.2267488E-04  | 1.2586900E-04  |
| P110  | 1.9239236E-04  | 2.2514085E-04  | 9.4470950E-05  | 1.0091997E-04  |
| P111  | 1.5349217E-04  | 2.7010984E-04  | 6.6380113E-05  | 7.6066127E-05  |
| P112  | 2.1287808E-04  | 1.0974269E-04  | 1.2194138E-04  | 1.2082090E-04  |
| P113  | 2.0507427E-04  | 1.1965437E-04  | 1.1531820E-04  | 1.1552445E-04  |
| P114  | 1.6032766E-04  | 1.7214884E-04  | 8.1608943E-05  | 8.6299692E-05  |
| P115  | 1.1299549E-04  | 2.2530522E-04  | 4.8235273E-05  | 5.6054054E-05  |
| P116  | 1.5552621E-04  | 7.2537166E-05  | 9.2535954E-05  | 9.2256314E-05  |
| P117  | 7.2537166E-05  | 1.6797077E-04  | 3.0662258E-05  | 3.6019537E-05  |
| P118  | 9.2535954E-05  | 3.0662258E-05  | 7.1227563E-05  | 6.4343886E-05  |
| P119  | 9.2256314E-05  | 3.6019537E-05  | 6.4343886E-05  | 6.3267702E-05  |
| P120  | 6.6299722E-05  | 6.8420352E-05  | 3.9667457E-05  | 4.1636901E-05  |
| P121  | 6.5520040E-07  | -7.8332502E-07 | 5.7218017E-07  | 5.4019288E-07  |
| P122  | 3.9764108E-05  | 1.0014502E-04  | 1.6694162E-05  | 1.9759091E-05  |
| P123  | 3.8645115E-05  | 1.4275000E-05  | 2.8357750E-05  | 2.7994838E-05  |
| P124  | 1.6214866E-05  | 4.2862319E-05  | 6.7787136E-06  | 8.0606974E-06  |
| P125  | -8.1499978E-06 | -2.8872637E-06 | -6.1074733E-06 | -5.8448864E-06 |
| P126  | -3.5263157E-06 | -9.0458807E-06 | -1.4781100E-06 | -1.7525307E-06 |

| (AMN) | P120           | P121           | P122           | P123           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 1.7812483E-04  | -2.5924873E-07 | 1.8862443E-04  | 6.5003473E-05  |
| P101  | 1.7881655E-04  | -7.1146691E-07 | 2.0763096E-04  | 5.7566125E-05  |
| P102  | 1.7945659E-04  | -1.1299024E-06 | 2.2521763E-04  | 5.0684377E-05  |
| P103  | 1.5669826E-04  | -2.3800203E-07 | 1.6633735E-04  | 5.7250798E-05  |
| P104  | 1.5700303E-04  | -5.9696317E-07 | 1.8118003E-04  | 5.1253780E-05  |
| P105  | 1.5773003E-04  | -9.4391328E-07 | 1.9595850E-04  | 4.5626348E-05  |
| P106  | 1.3474974E-04  | 4.4607187E-08  | 1.3294316E-04  | 5.3744509E-05  |
| P107  | 1.3526076E-04  | -4.4125323E-07 | 1.5313151E-04  | 4.5671011E-05  |
| P108  | 1.3622307E-04  | -9.1992853E-07 | 1.7348017E-04  | 3.7895697E-05  |
| P109  | 1.1264623E-04  | 3.5678355E-07  | 9.8196503E-05  | 5.0690088E-05  |
| P110  | 1.1360051E-04  | -2.7654773E-07 | 1.2480069E-04  | 4.0271676E-05  |
| P111  | 1.1473702E-04  | -9.1220603E-07 | 1.5168136E-04  | 2.9889829E-05  |
| P112  | 9.0334363E-05  | 7.6408310E-07  | 5.9389007E-05  | 4.9312529E-05  |
| P113  | 9.0734385E-05  | 6.2901902E-07  | 6.5259120E-05  | 4.7121370E-05  |
| P114  | 9.2147990E-05  | -1.1570626E-07 | 9.6834092E-05  | 3.4874197E-05  |
| P115  | 9.3159031E-05  | -8.8544080E-07 | 1.2901938E-04  | 2.2131522E-05  |
| P116  | 6.6299722E-05  | 6.5520040E-07  | 3.9764108E-05  | 3.8645115E-05  |
| P117  | 6.8420352E-05  | -7.8332502E-07 | 1.0014502E-04  | 1.4275000E-05  |
| P118  | 3.9867457E-05  | 5.7218017E-07  | 1.6694162E-05  | 2.8357750E-05  |
| P119  | 4.1636901E-05  | 5.4019288E-07  | 1.9759091E-05  | 2.7994838E-05  |
| P120  | 4.2958446E-05  | -2.1253057E-08 | 4.3819194E-05  | 1.7998803E-05  |
| P121  | -2.1253057E-08 | 1.3993207E-08  | -5.8797790E-07 | 2.5056121E-07  |
| P122  | 4.3819194E-05  | -5.8797790E-07 | 6.7632300E-05  | 7.8510749E-06  |
| P123  | 1.7998803E-05  | 2.5056121E-07  | 7.8510749E-06  | 1.5684688E-05  |
| P124  | 1.9218375E-05  | -2.7363108E-07 | 3.0300434E-05  | 3.2079302E-06  |
| P125  | -3.7043774E-06 | -5.2379062E-08 | -1.5830257E-06 | -3.0941131E-06 |
| P126  | -3.9958454E-06 | 5.4900116E-08  | -6.2193001E-06 | -6.9676510E-07 |

| (AMN) | P124           | P125           | P126           |
|-------|----------------|----------------|----------------|
| P100  | 7.5850614E-05  | -1.3562756E-05 | -1.6640579E-05 |
| P101  | 8.4001456E-05  | -1.1922159E-05 | -1.8358700E-05 |
| P102  | 9.1543396E-05  | -1.0404121E-05 | -1.9948471E-05 |
| P103  | 6.7211268E-05  | -1.1949842E-05 | -1.4700686E-05 |
| P104  | 7.3581083E-05  | -1.0627887E-05 | -1.6042786E-05 |
| P105  | 7.9911950E-05  | -9.3855351E-06 | -1.7378153E-05 |
| P106  | 5.3815622E-05  | -1.1274448E-05 | -1.1757314E-05 |
| P107  | 6.2472141E-05  | -9.4942336E-06 | -1.3582175E-05 |
| P108  | 7.1186997E-05  | -7.7774462E-06 | -1.5420679E-05 |
| P109  | 3.9830929E-05  | -1.0696805E-05 | -8.6909465E-06 |
| P110  | 5.1237580E-05  | -8.3986310E-06 | -1.1095673E-05 |
| P111  | 6.2758728E-05  | -6.1089106E-06 | -1.3525060E-05 |
| P112  | 2.4023859E-05  | -1.0498510E-05 | -5.2509063E-06 |
| P113  | 2.6527213E-05  | -9.9939543E-06 | -5.7804023E-06 |
| P114  | 4.0105463E-05  | -7.2743656E-06 | -8.6377186E-06 |
| P115  | 5.3994739E-05  | -4.4966025E-06 | -1.1554219E-05 |
| P116  | 1.6214866E-05  | -8.1499978E-06 | -3.5263157E-06 |
| P117  | 4.2862319E-05  | -2.8872637E-06 | -9.0458807E-06 |
| P118  | 6.7787136E-06  | -6.1074733E-06 | -1.4781100E-06 |
| P119  | 8.0606974E-06  | -5.8448864E-06 | -1.7525307E-06 |
| P120  | 1.9218375E-05  | -3.7043774E-06 | -3.9958454E-06 |
| P121  | -2.7363108E-07 | -5.2379062E-08 | 5.4900116E-08  |
| P122  | 3.0300434E-05  | -1.5830257E-06 | -6.2193001E-06 |
| P123  | 3.2079302E-06  | -3.0941131E-06 | -6.9676510E-07 |
| P124  | 1.7127686E-05  | -6.4558539E-07 | -3.2623004E-06 |
| P125  | -6.4558539E-07 | 3.1430541E-06  | 1.4038937E-07  |
| P126  | -3.2623004E-06 | 1.4038937E-07  | 3.3841238E-06  |

## INTERNAL LOADS ON REDUNDANT STRUCTURE FOR UNIT APPLIED LOADS

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| (GIM) |     | P100           | P101           | P102           | P103           |
|-------|-----|----------------|----------------|----------------|----------------|
| 1     | Q1  | 7.4276275E-03  | -7.0558494E-02 | -1.4271867E-01 | 5.9462052E-04  |
| 2     | Q2  | -4.0084683E-02 | -4.7782509E-02 | -5.4905281E-02 | -4.0889747E-02 |
| 3     | Q3  | -3.1806236E-02 | -4.1447250E-02 | -5.0368004E-02 | -4.1204056E-02 |
| 4     | Q4  | -3.1875977E-02 | -3.0379183E-02 | -2.8994224E-02 | -4.0066126E-02 |
| 5     | Q5  | -4.5025728E-02 | -6.2252671E-02 | -7.8269694E-02 | -4.7798524E-02 |
| 6     | Q6  | -4.5025725E-02 | -6.2292669E-02 | -7.8269696E-02 | -4.7798523E-02 |
| 7     | Q7  | -4.5025724E-02 | -6.2292669E-02 | -7.8269697E-02 | -4.7798522E-02 |
| 8     | Q8  | -4.5025727E-02 | -6.2292671E-02 | -7.8269693E-02 | -4.7798524E-02 |
| 9     | Q9  | 2.4063974E-09  | 1.5799376E-09  | 8.1521780E-10  | 1.8212091E-09  |
| 10    | Q10 | 1.4426231E-01  | 6.6892363E-02  | -4.6976661E-03 | -5.6372482E-04 |
|       |     |                |                |                |                |
| 11    | Q11 | 6.2858458E-02  | 5.4981556E-02  | 4.7693085E-02  | 8.0659177E-02  |
| 12    | Q12 | 5.2251596E-02  | 4.1661590E-02  | 3.1862724E-02  | 5.4727429E-02  |
| 13    | Q13 | 5.1104864E-02  | 5.3669195E-02  | 5.6041947E-02  | 4.8949339E-02  |
| 14    | Q14 | 4.3771273E-02  | 5.4209062E-02  | 6.3867076E-02  | 4.0701605E-02  |
| 15    | Q15 | 4.3771276E-02  | 5.4209068E-02  | 6.3867084E-02  | 4.0701605E-02  |
| 16    | Q16 | 1.0390795E-01  | 9.8848804E-02  | 9.4167594E-02  | 9.2915492E-02  |
| 17    | Q17 | 1.0390796E-01  | 9.8848807E-02  | 9.4167598E-02  | 9.2915496E-02  |
| 18    | Q18 | -1.1728640E-09 | -9.2250530E-10 | -6.9385825E-10 | -1.0460309E-09 |
| 19    | Q25 | -2.5791185E-03 | -2.4225514E-02 | -4.4254820E-02 | 1.7190741E-03  |
| 20    | Q30 | -4.6862612E-02 | -5.9420799E-02 | -7.1040823E-02 | -3.8611051E-02 |
|       |     |                |                |                |                |
| 21    | Q31 | -3.7071131E-02 | 5.3500278E-03  | 4.4602106E-02  | -4.3473039E-02 |
| 22    | Q32 | -4.0632815E-02 | 3.5190621E-03  | 4.4372571E-02  | -3.6880850E-02 |
| 23    | Q33 | 3.5403759E-03  | -2.0300801E-04 | -3.6667203E-03 | -5.5148857E-03 |
| 24    | Q34 | -9.6551445E-04 | -4.0972394E-03 | -6.9949768E-03 | -3.2894522E-03 |
| 25    | Q35 | 7.7295461E-03  | 1.6201860E-02  | 2.4041232E-02  | 4.5399660E-03  |
| 26    | Q36 | -5.3668678E-03 | 1.8545271E-03  | 8.5364126E-03  | -5.9786941E-03 |
| 27    | Q37 | -1.4594340E-02 | -2.8411623E-02 | -4.1196689E-02 | -1.0246741E-02 |
| 28    | Q38 | 7.5068399E-03  | -7.4638296E-03 | -2.1316110E-02 | 5.0495938E-03  |
| 29    | P40 | -5.7999430E-01 | -1.3774703E 00 | -2.1153700E 00 | -3.5023180E-02 |
| 30    | P41 | -2.1421380E 00 | -2.2577150E 00 | -2.3646582E 00 | -1.0913426E 00 |
|       |     |                |                |                |                |
| 31    | P42 | -3.2586820E 00 | -3.1265194E 00 | -3.0042290E 00 | -2.1546931E 00 |
| 32    | P43 | -4.4594275E 00 | -3.9556712E 00 | -3.4895478E 00 | -3.3266008E 00 |
| 33    | P44 | -4.4571978E 00 | -3.9536935E 00 | -3.4878032E 00 | -3.3249376E 00 |
| 34    | P45 | -5.3436193E 00 | -5.1800492E 00 | -5.0286983E 00 | -4.2659470E 00 |
| 35    | P46 | -6.2300859E 00 | -6.4064673E 00 | -6.5696719E 00 | -5.2070044E 00 |
| 36    | P47 | -7.0630620E 00 | -7.5588817E 00 | -8.0176618E 00 | -6.0912771E 00 |
| 37    | P48 | -7.8960473E 00 | -8.7112960E 00 | -9.4656512E 00 | -6.9755498E 00 |
| 38    | P49 | -7.8960377E 00 | -8.7112960E 00 | -9.4656510E 00 | -6.9755499E 00 |
| 39    | P50 | -1.3171622E 00 | -4.4621095E-01 | 3.1493342E-01  | 1.4075892E-01  |
| 40    | P51 | -1.4196450E 00 | -1.3155721E 00 | -1.2192723E 00 | -7.2100431E-01 |
|       |     |                |                |                |                |
| 41    | P52 | -1.9949752E 00 | -2.1167165E 00 | -2.2293630E 00 | -1.3745356E 00 |
| 42    | P53 | -3.1425695E 00 | -3.7816600E 00 | -4.3733925E 00 | -2.3841701E 00 |
| 43    | P54 | -2.6463400E 00 | -3.1844124E 00 | -3.6828085E 00 | -2.0076959E 00 |
| 44    | P55 | -3.8249959E 00 | -3.9995626E 00 | -4.1610885E 00 | -3.1296714E 00 |
| 45    | P56 | -5.0037150E 00 | -4.8144864E 00 | -4.6393942E 00 | -4.2517068E 00 |
| 46    | P57 | -4.7690409E 00 | -4.5886871E 00 | -4.4218066E 00 | -4.0523016E 00 |
| 47    | P58 | -5.8243793E 00 | -5.3181052E 00 | -4.8496518E 00 | -5.0569339E 00 |
| 48    | P59 | -6.8797184E 00 | -6.0475233E 00 | -5.2774972E 00 | -6.0615661E 00 |
| 49    | P60 | -6.8777184E 00 | -6.0475233E 00 | -5.2774972E 00 | -6.0615661E 00 |
| 50    | P62 | -1.1613471E-01 | -4.4457440E-02 | 2.1865334E-02  | 1.4494253E-01  |

| (GIM)  | P100           | P101           | P102           | P103           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | -1.1611146E-01 | -4.4448540E-02 | 2.1660957E-02  | 1.4491348E-01  |
| 52 P64 | 1.5061195E-02  | 5.7655650E-03  | -2.8556551E-03 | -1.8797203E-02 |
| 53 P67 | -1.3336834E-01 | -1.1746797E-01 | -1.0275512E-01 | -8.7221143E-02 |
| 54 P68 | -1.3334163E-01 | -1.1744443E-01 | -1.0273453E-01 | -8.7303655E-02 |
| 55 P69 | 1.7296178E-02  | 1.5234102E-02  | 1.3326033E-02  | 1.1324442E-02  |
| 56 P72 | -4.4164150E-01 | -4.7824348E-01 | -5.1211171E-01 | -3.5591770E-01 |
| 57 P73 | -4.4155303E-01 | -4.7814761E-01 | -5.1200910E-01 | -3.5584637E-01 |
| 58 P74 | 5.7275293E-02  | 6.2022103E-02  | 6.6414383E-02  | 4.6157998E-02  |
| 59 P77 | 1.2700044E 00  | 1.0769255E 00  | 8.9826719E-01  | 1.0153826E 00  |
| 60 P79 | 8.3232012E-01  | 7.7764297E-01  | 7.2705045E-01  | 6.0647556E-01  |
| 61 P80 | 8.3215375E-01  | 7.7748714E-01  | 7.2690476E-01  | 6.0635401E-01  |
| 62 P81 | -1.0794140E-01 | -1.0085041E-01 | -9.4289206E-02 | -7.8652169E-02 |
| 63 P82 | 1.3556659E-01  | 1.2025240E-01  | 1.0608224E-01  | 1.0112866E-01  |
| 64 P83 | 0.             | -0.            | -0.            | 0.             |
| 65 P84 | 0.             | -0.            | -0.            | 0.             |
| 66 P93 | -7.6476012E-01 | -6.6673161E-01 | -5.7602577E-01 | -6.2152351E-02 |
| 67 P94 | -8.9145647E-01 | -8.6524099E-01 | -8.4098372E-01 | -4.2365244E-01 |
| 68 P95 | -7.4640394E-01 | -7.7381934E-01 | -7.9918711E-01 | -4.8631500E-01 |
| 69 P96 | 4.4575471E-01  | 6.1669746E-01  | 7.7487003E-01  | 4.7320541E-01  |
| 70 P97 | 1.0079072E 00  | 9.5883349E-01  | 9.1342576E-01  | 9.0126042E-01  |
| 71 Q19 | 8.2879920E-02  | 4.6015997E-02  | 1.1905969E-02  | 6.0209180E-03  |
| 72 Q20 | 4.1219183E-02  | 9.6954275E-03  | -1.9473350E-02 | 2.6351346E-03  |
| 73 Q21 | 5.7830458E-02  | 1.4316059E-02  | -2.5947594E-02 | 4.0346260E-02  |
| 74 Q22 | 5.0928614E-02  | 3.5021521E-03  | -4.0361324E-02 | 2.0653345E-02  |
| 75 Q23 | 2.5340486E-02  | 4.1879508E-03  | -1.5384370E-02 | 2.4158448E-02  |
| 76 Q24 | 3.3241854E-02  | 9.1679128E-03  | -1.3107625E-02 | 2.0745064E-02  |
| 77 Q26 | 3.8081646E-02  | 1.7928714E-02  | -7.1866589E-04 | 2.8211350E-02  |
| 78 Q28 | 1.3292141E-02  | -1.4757483E-02 | -4.0711648E-02 | 1.3617676E-02  |

| (GIM)  | P104            | P105           | P106           | P107           |
|--------|-----------------|----------------|----------------|----------------|
| 1 Q1   | 6.9854565E-04   | 4.4027803E-04  | 7.5927644E-05  | -1.0836014E-04 |
| 2 Q2   | -5.9257309E-02  | -7.6204032E-02 | -1.4980771E-02 | 6.6444878E-03  |
| 3 Q3   | -4.9770632E-02  | -5.8452481E-02 | -3.7275968E-02 | -5.7264230E-02 |
| 4 Q4   | -3.8345335E-02  | -3.6885661E-02 | -4.8393596E-02 | -4.6162120E-02 |
| 5 Q5   | -6.1398465E-02  | -7.4654090E-02 | -4.0654234E-02 | -5.8966431E-02 |
| 6 Q6   | -6.1398484E-02  | -7.4654092E-02 | -4.0654233E-02 | -5.8966428E-02 |
| 7 Q7   | -6.1398484E-02  | -7.4654092E-02 | -4.0654233E-02 | -5.8966428E-02 |
| 8 Q8   | -6.1398485E-02  | -7.4654090E-02 | -4.0654236E-02 | -5.8966431E-02 |
| 9 Q9   | 1.1014762E-09   | 2.2484409E-09  | 1.0343019E-09  | 6.7264918E-10  |
| 10 Q10 | -6.6225024E-04  | -4.1740192E-04 | -7.1982474E-05 | 1.0272980E-04  |
| 11 Q11 | 6.2717084E-02   | 4.5215988E-02  | -1.5850120E-02 | 4.8606652E-03  |
| 12 Q12 | 4.5212792E-02   | 3.6425935E-02  | 7.2966250E-02  | 5.3003043E-02  |
| 13 Q13 | 5.1344777E-02   | 5.3757879E-02  | 4.5698319E-02  | 4.8666779E-02  |
| 14 Q14 | 4.9006600E-02   | 5.7132165E-02  | 3.1422679E-02  | 4.2789086E-02  |
| 15 Q15 | 4.9006605E-02   | 5.7132173E-02  | 3.1422677E-02  | 4.2789087E-02  |
| 16 Q16 | 8.8794264E-02   | 8.5075166E-02  | 8.4684720E-02  | 7.9232857E-02  |
| 17 Q17 | 8.8794267E-02   | 8.5075170E-02  | 8.4684730E-02  | 7.9232857E-02  |
| 18 Q18 | -8.4547995E-10  | -6.5486555E-10 | -1.0629487E-09 | -7.7248337E-10 |
| 19 Q25 | -1.5719487E-02  | -3.2566433E-02 | 1.8364579E-02  | -4.7643672E-03 |
| 20 Q30 | -4.6523592E-02  | -5.8196371E-02 | -2.3088236E-02 | -3.6484821E-02 |
| 21 Q31 | 5.5138579E-02   | 3.9713994E-02  | -1.3782356E-02 | 4.1751693E-03  |
| 22 Q32 | -5.3340873E-02  | 4.5906273E-02  | -1.3414179E-02 | 6.0007296E-03  |
| 23 Q33 | -2.1174819E-03  | 1.5996086E-03  | -2.4727647E-02 | 4.0242277E-02  |
| 24 Q34 | -1.7218204E-03  | -1.5628966E-04 | -2.1533951E-02 | -5.1991953E-02 |
| 25 Q35 | 1.7223039E-02   | 1.7474501E-02  | -9.1462029E-03 | 5.3756145E-03  |
| 26 Q36 | 7.4779500E-04   | 7.3393917E-03  | -1.5040425E-02 | -7.5988070E-04 |
| 27 Q37 | -2.1405187E-02  | -3.2182850E-02 | 1.7000307E-03  | -1.3088818E-02 |
| 28 Q38 | -6.2986452E-03  | -1.7950195E-02 | 1.2311138E-02  | -3.9578430E-03 |
| 29 P40 | -2.2388554E-01  | -4.3626513E-01 | 1.4823575E-01  | -1.8562894E-01 |
| 30 P41 | -1.1696547E 00  | -1.2260127E 00 | -1.1058294E-01 | -3.5667857E-02 |
| 31 P42 | -2.0643550E 00  | -1.9788432E 00 | -1.1445225E 00 | -1.0308281E 00 |
| 32 P43 | -2.7745363E 00  | -2.5455881E 00 | -2.475174 E 00 | -1.9422205E 00 |
| 33 P44 | -2.7237739E 00  | -2.5443154E 00 | -2.4739372E 00 | -1.9412495E 00 |
| 34 P45 | -4.1318259E 00  | -4.0140305E 00 | -2.742972E 00  | -3.1021217E 00 |
| 35 P46 | -5.3406124E 00  | -5.4838200E 00 | -4.0746777E 00 | -4.2630526E 00 |
| 36 P47 | -6.4765112E 00  | -6.8649212E 00 | -4.8268011E 00 | -5.3539315E 00 |
| 37 P48 | -7.6123832E 00  | -8.2460216E 00 | -5.5789043E 00 | -6.4448105E 00 |
| 38 P49 | -7.6123833E 00  | -8.2460216E 00 | -5.5789045E 00 | -6.4448106E 00 |
| 39 P50 | 3.7560240E-01   | 5.7630746E-01  | -1.5771558E-01 | 1.9525648E-01  |
| 40 P51 | -6.5687593E-01  | -5.7737823E-01 | 1.2444576E-01  | 1.8002585E-01  |
| 41 P52 | -1.45502270E 00 | -1.5275168E 00 | -6.7942309E-01 | -7.8972659E-01 |
| 42 P53 | -2.6838497E 00  | -3.3728596E 00 | -1.2637324E 00 | -1.9319162E 00 |
| 43 P54 | -2.4284732E 00  | -2.8402647E 00 | -1.0641818E 00 | -1.6268554E 00 |
| 44 P55 | -3.2606784E 00  | -3.3959351E 00 | -2.3366433E 00 | -2.5101177E 00 |
| 45 P56 | -4.0929281E 00  | -3.9516354E 00 | -3.6091729E 00 | -3.3934312E 00 |
| 46 P57 | -3.9009649E 00  | -3.7663037E 00 | -3.4399027E 00 | -3.2342794E 00 |
| 47 P58 | -4.6459866E 00  | -4.2635614E 00 | -4.57943 E 00  | -4.0251179E 00 |
| 48 P59 | -5.3910033E 00  | -4.7608191E 00 | -5.7189726E 00 | -4.8159567E 00 |
| 49 P60 | -5.3910033E 00  | -4.7608191E 00 | -5.7189726E 00 | -4.8159567E 00 |
| 50 P62 | 1.0579153E 00   | 1.8645937E-01  | 8.7289931E-04  | 5.0265563E-02  |

| (GIM)  | P104           | P105           | P106           | P107           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 1.0577034E 00  | 1.8642200E-01  | 8.7272422E-04  | 5.0255488E-02  |
| 52 P64 | 3.6280181E-01  | -2.4181409E-02 | -1.1320400E-04 | -6.5188043E-03 |
| 53 P67 | -4.9768038E-02 | -5.1823671E-02 | 7.9521339E-02  | 1.1036484E 00  |
| 54 P68 | -4.9758064E-02 | -5.1813276E-02 | 7.9505395E-02  | 1.1034272E 00  |
| 55 P69 | 6.4542819E-03  | 6.7208716E-03  | -1.0312908E-02 | 3.5687081E-01  |
| 56 P72 | -3.8303820E-01 | -4.0033782E-01 | -2.0787882E-01 | -2.0563694E-01 |
| 57 P73 | -3.8296144E-01 | -4.0025759E-01 | -2.0783715E-01 | -2.0559573E-01 |
| 58 P74 | 4.9675186E-02  | 5.1918728E-02  | 2.6959237E-02  | 2.6668497E-02  |
| 59 P77 | 8.5844911E-01  | 7.0990590E-01  | 8.7530106E-01  | 6.6040312E-01  |
| 60 P79 | 5.6009228E-01  | 5.1842673E-01  | 4.0632338E-01  | 3.3842515E-01  |
| 61 P80 | 5.5998006E-01  | 5.1832284E-01  | 4.0624194E-01  | 3.3835733E-01  |
| 62 P81 | -7.2636852E-02 | -6.7233361E-02 | -5.2694976E-02 | -4.3889440E-02 |
| 63 P82 | 8.8905896E-02  | 7.7385873E-02  | 7.5245312E-02  | 5.9043498E-02  |
| 64 P83 | -0.            | -0.            | 0.             | -0.            |
| 65 P84 | -0.            | -0.            | 0.             | -0.            |
| 66 P93 | -5.8113191E-02 | -1.2558669E-02 | -2.0389058E-02 | 2.6984099E-02  |
| 67 P94 | -3.9906019E-01 | -4.0611074E-01 | -3.4717057E-02 | -7.1173897E-02 |
| 68 P95 | -5.0494859E-01 | -5.2684842E-01 | -1.9766757E-01 | -2.1480521E-01 |
| 69 P96 | 6.0784502E-01  | 7.3907549E-01  | 4.0247693E-01  | 5.8376766E-01  |
| 70 P97 | 8.6130445E-01  | 8.2522919E-01  | 8.2144186E-01  | 7.6855877E-01  |
| 71 Q19 | 1.6908272E-02  | 2.6542018E-02  | -7.4498511E-03 | 9.2367455E-03  |
| 72 Q20 | 1.3742524E-02  | 2.5857877E-02  | -8.5605562E-03 | 1.0706719E-02  |
| 73 Q21 | 1.4418188E-02  | -8.7529414E-03 | 6.7051833E-03  | 3.2546923E-03  |
| 74 Q22 | -4.1550868E-03 | -3.0191906E-02 | 5.9246576E-03  | -2.0925184E-03 |
| 75 Q23 | 8.1037221E-03  | -8.0168837E-03 | 2.6010192E-02  | 8.5361874E-03  |
| 76 Q24 | 2.3357201E-03  | -1.4593762E-02 | 1.7133876E-02  | 7.1223616E-04  |
| 77 Q26 | 1.1787864E-02  | -3.8660761E-03 | 2.9132629E-02  | 6.9372647E-03  |
| 78 Q28 | -8.7162492E-03 | -3.0229959E-02 | 3.0182227E-02  | -2.6764377E-05 |

| (GIM)  | P108           | P109           | P110           | P111           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | -1.2621586E-04 | 1.7526507E-04  | 1.6048681E-05  | -1.2698292E-04 |
| 2 Q2   | 2.6916566E-02  | -1.2439648E-02 | 4.0993078E-03  | 2.0964163E-02  |
| 3 Q3   | -7.5910964E-02 | -1.5991251E-02 | 2.4862044E-03  | 1.9032950E-02  |
| 4 Q4   | -4.4568799E-02 | -4.8773414E-02 | -5.3869249E-02 | -5.7455618E-02 |
| 5 Q5   | -7.7163218E-02 | -3.2054484E-02 | -5.6163709E-02 | -8.0422060E-02 |
| 6 Q6   | -7.7163220E-02 | -3.2054483E-02 | -5.6163709E-02 | -8.0422062E-02 |
| 7 Q7   | -7.7163220E-02 | -3.2054483E-02 | -5.6163707E-02 | -8.0422062E-02 |
| 8 Q8   | -7.7163218E-02 | -3.2054484E-02 | -5.6163710E-02 | -8.0422060E-02 |
| 9 Q9   | 2.6296415E-09  | 9.4809282E-10  | 1.0744611E-09  | 1.1449886E-09  |
| 10 Q10 | 1.1965766E-04  | -1.6615839E-04 | -1.5214857E-05 | 1.2038488E-04  |
| 11 Q11 | 2.5651832E-02  | -1.2238404E-02 | 4.3679277E-03  | 2.0630541E-02  |
| 12 Q12 | 3.2912629E-02  | -1.5068160E-02 | 9.8769145E-04  | 1.8111450E-02  |
| 13 Q13 | 5.2040875E-02  | 5.1500546E-02  | 4.9221686E-02  | 4.6322348E-02  |
| 14 Q14 | 5.4191870E-02  | 2.2327192E-02  | 3.7002040E-02  | 5.1462763E-02  |
| 15 Q15 | 5.4191876E-02  | 2.2327188E-02  | 3.7002041E-02  | 5.1462769E-02  |
| 16 Q16 | 7.4191998E-02  | 7.7196015E-02  | 7.0141118E-02  | 6.3024601E-02  |
| 17 Q17 | 7.4192001E-02  | 7.7196026E-02  | 7.0141122E-02  | 6.3024603E-02  |
| 18 Q18 | -5.2909352E-10 | -1.0936900E-09 | -7.4313775E-10 | -3.9409760E-10 |
| 19 Q25 | -2.8335417E-02 | 2.9018673E-02  | 1.7852467E-03  | -2.3070455E-02 |
| 20 Q30 | -4.9824643E-02 | -6.9106445E-03 | -2.4467283E-02 | -4.1939749E-02 |
| 21 Q31 | 2.2303349E-02  | -1.0571442E-02 | 3.8204324E-03  | 1.7922132E-02  |
| 22 Q32 | 2.4104114E-02  | -1.1216359E-02 | 3.6479048E-03  | 1.8792427E-02  |
| 23 Q33 | 1.0905251E-02  | -4.6849818E-03 | -1.9116351E-03 | 1.9473825E-03  |
| 24 Q34 | 1.3688271E-02  | -5.4039523E-03 | -5.4047844E-04 | 2.5050878E-03  |
| 25 Q35 | 2.0290405E-02  | -3.0864348E-02 | 3.7635352E-02  | 2.4904718E-02  |
| 26 Q36 | 1.2174954E-02  | -2.8664229E-02 | -4.4270333E-02 | 2.2623760E-02  |
| 27 Q37 | -2.7836236E-02 | 9.4203228E-03  | -6.3029701E-03 | -2.1689116E-02 |
| 28 Q38 | -1.9688495E-02 | 1.5094897E-02  | -1.3610789E-03 | -1.8850331E-02 |
| 29 P40 | -5.0132064E-01 | 2.5963196E-01  | -1.0122269E-01 | -4.6091213E-01 |
| 30 P41 | 9.4662737E-02  | -2.4074323E-03 | -3.0020988E-02 | -3.5763295E-02 |
| 31 P42 | -8.9887664E-01 | -3.9000437E-01 | 2.9815285E-02  | 3.7074118E-01  |
| 32 P43 | -1.4245615E 00 | -1.6765751E 00 | -9.7593751E-01 | -2.7561268E-01 |
| 33 P44 | -1.4238492E 00 | -1.6757368E 00 | -9.7544954E-01 | -2.7547497E-01 |
| 34 P45 | -2.9429614E 00 | -2.3067935E 00 | -2.0811444E 00 | -1.8587439E 00 |
| 35 P46 | -4.4621510E 00 | -2.9378822E 00 | -3.1868956E 00 | -3.4420934E 00 |
| 36 P47 | -5.8896702E 00 | -3.5308901E 00 | -4.2259241E 00 | -4.9299014E 00 |
| 37 P48 | -7.3171902E 00 | -4.1238979E 00 | -5.2649528E 00 | -6.4177094E 00 |
| 38 P49 | -7.3171902E 00 | -4.1238980E 00 | -5.2649530E 00 | -6.4177094E 00 |
| 39 P50 | 5.5544046E-01  | -2.6909234E-01 | 1.1916744E-01  | 5.0882117E-01  |
| 40 P51 | -3.4608392E-02 | 1.3861959E-02  | 1.6972985E-02  | 4.7652121E-02  |
| 41 P52 | -8.7748495E-01 | 4.0842699E-01  | 5.2730489E-02  | -3.7025538E-01 |
| 42 P53 | -2.5956768E 00 | -7.2164714E-02 | -9.6131117E-01 | -1.8536549E 00 |
| 43 P54 | -2.1858043E 00 | -6.0769512E-02 | -8.0951452E-01 | -1.5609520E 00 |
| 44 P55 | -2.6895327E 00 | -1.5125633E 00 | -1.7531109E 00 | -1.9968161E 00 |
| 45 P56 | -3.1932879E 00 | -2.9644347E 00 | -2.6967576E 00 | -2.4327033E 00 |
| 46 P57 | -3.0435227E 00 | -2.8254027E 00 | -2.5702796E 00 | -2.3186096E 00 |
| 47 P58 | -3.4943188E 00 | -4.1256821E 00 | -3.4152456E 00 | -2.7086793E 00 |
| 48 P59 | -3.9451149E 00 | -5.4259619E 00 | -4.2602116E 00 | -3.0987491E 00 |
| 49 P60 | -3.9451149E 00 | -5.4259619E 00 | -4.2602116E 00 | -3.0987491E 00 |
| 50 P62 | 6.0940730E-02  | -2.3438822E-02 | -2.1178206E-03 | 3.3913615E-02  |



| (GIM)  | P108           | P109           | P110           | P111           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 6.0928515E-02  | -2.3434124E-02 | -2.1173966E-03 | 3.3906817E-02  |
| 52 P64 | -7.9032379E-03 | 3.0397172E-03  | 2.7465442E-04  | -4.3981646E-03 |
| 53 P67 | 9.1216886E-02  | -2.4826715E-02 | 4.0020872E-02  | 1.8118723E-02  |
| 54 P68 | 1.1198617E-02  | -2.4821744E-02 | 4.0012853E-02  | 1.8115095E-02  |
| 55 P69 | -1.1829670E-02 | 3.2197092E-03  | -5.1901985E-03 | -2.3497679E-03 |
| 56 P72 | -2.6248448E-01 | 5.2854372E-02  | 1.0856510E 00  | -5.9916190E-02 |
| 57 P73 | -2.6243188E-01 | 5.2843785E-02  | 1.0854335E 00  | -5.9904186E-02 |
| 58 P74 | 3.4040901E-02  | -6.8545414E-03 | 3.5920485E-01  | 7.7703692E-03  |
| 59 P77 | 4.5032430E-01  | 7.2869779E-01  | 4.5624179E-01  | 1.8835324E-01  |
| 60 P79 | 2.8952487E-01  | 2.2385518E-01  | 1.8376561E-01  | 9.1628685E-02  |
| 61 P80 | 2.8946685E-01  | 2.2381033E-01  | 1.8372878E-01  | 9.1610321E-02  |
| 62 P81 | -3.7547699E-02 | -2.9031172E-02 | -2.3832064E-02 | -1.1883077E-02 |
| 63 P82 | 4.3306661E-02  | 5.0967882E-02  | 2.9568496E-02  | 8.3786198E-03  |
| 64 P83 | -0.            | 0.             | 0.             | -0.            |
| 65 P84 | -0.            | 0.             | 0.             | -0.            |
| 66 P93 | 5.4679714E-02  | -4.0333319E-02 | 6.4997766E-03  | 5.1468417E-02  |
| 67 P94 | -5.2819939E-02 | -6.7539620E-03 | 1.3175304E-02  | -1.0877894E-03 |
| 68 P95 | -2.6422818E-01 | 5.2025807E-02  | -5.4014938E-02 | -6.0074420E-02 |
| 69 P96 | 7.6391590E-01  | 3.1733940E-01  | 5.5602072E-01  | 7.9617841E-01  |
| 70 P97 | 7.1966246E-01  | 7.4880151E-01  | 6.8036891E-01  | 6.1133868E-01  |
| 71 Q19 | 2.6102928E-02  | -1.2754185E-02 | 5.5593879E-03  | 2.3922825E-02  |
| 72 Q20 | 2.9081636E-02  | -1.4951364E-02 | 5.9134668E-03  | 2.6726595E-02  |
| 73 Q21 | -1.9504047E-03 | 9.9798828E-04  | -4.1268582E-04 | -9.4275221E-04 |
| 74 Q22 | -7.8065072E-03 | 2.8272421E-03  | -4.9032791E-05 | -3.8057803E-03 |
| 75 Q23 | -6.5129972E-03 | 3.3876549E-03  | 2.6602527E-03  | -1.4362103E-03 |
| 76 Q24 | -1.8028924E-02 | 6.5895337E-03  | -9.9976523E-04 | -4.6493573E-03 |
| 77 Q26 | -1.3941442E-02 | 2.6184539E-02  | 4.7277402E-03  | -1.9797868E-02 |
| 78 Q28 | -2.9804391E-02 | 4.7959902E-02  | 8.6811950E-03  | -3.0360864E-02 |

| (GIM)  | P112           | P113           | P114           | P115           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 2.1867504E-04  | 1.9279160E-04  | 4.5157779E-05  | -1.2535657E-04 |
| 2 Q2   | -1.8749803E-02 | -1.5546215E-02 | 1.0385480E-03  | 1.8645449E-02  |
| 3 Q3   | -1.4341617E-02 | -1.2173463E-02 | -3.6939005E-04 | 1.4293177E-02  |
| 4 Q4   | -3.5377509E-02 | -3.1323169E-02 | -2.1835818E-03 | 2.7967239E-02  |
| 5 Q5   | -1.7737315E-02 | -2.2718989E-02 | -5.2344499E-02 | -8.3760097E-02 |
| 6 Q6   | -1.7737314E-02 | -2.2718989E-02 | -5.2344499E-02 | -8.3760096E-02 |
| 7 Q7   | -1.7737314E-02 | -2.2718988E-02 | -5.2344497E-02 | -8.3760098E-02 |
| 8 Q8   | -1.7737315E-02 | -2.2718990E-02 | -5.2344500E-02 | -8.3760097E-02 |
| 9 Q9   | 5.6893356E-10  | 5.6494882E-10  | 1.0169657E-09  | 2.2978104E-09  |
| 10 Q10 | -2.0731278E-04 | -1.8277424E-04 | -4.2811449E-05 | 1.1884305E-04  |
| 11 Q11 | -1.8583102E-02 | -1.5383984E-02 | 1.1013276E-03  | 1.8401731E-02  |
| 12 Q12 | -1.3422329E-02 | -1.0930957E-02 | 1.2752961E-03  | 1.3580861E-02  |
| 13 Q13 | -3.7421280E-02 | -3.3582230E-02 | -3.9333365E-03 | 2.9778184E-02  |
| 14 Q14 | 9.9172676E-03  | 1.9027501E-02  | 4.0253515E-02  | 4.7290891E-02  |
| 15 Q15 | 9.9172573E-03  | 1.9027493E-02  | 4.0253514E-02  | 4.7290896E-02  |
| 16 Q16 | 7.0526652E-02  | 7.2060683E-02  | 6.5652977E-02  | 5.1417787E-02  |
| 17 Q17 | 7.0526659E-02  | 7.2060683E-02  | 6.5652978E-02  | 5.1417789E-02  |
| 18 Q18 | -1.2117551E-09 | -1.0988656E-09 | -6.6520334E-10 | -2.6763774E-10 |
| 19 Q25 | 1.8125196E-02  | 1.7056622E-02  | 4.2711845E-03  | -1.3276750E-02 |
| 20 Q30 | 1.4403024E-02  | 7.7896171E-03  | -1.5992621E-02 | -3.3784045E-02 |
| 21 Q31 | -1.6080488E-02 | -1.3305095E-02 | 9.8811384E-04  | 1.5978619E-02  |
| 22 Q32 | -1.6876222E-02 | -1.4000265E-02 | 8.9730099E-04  | 1.6722039E-02  |
| 23 Q33 | 6.0638444E-04  | 6.4949307E-04  | 3.5574450E-04  | -3.6411827E-04 |
| 24 Q34 | -4.7118519E-06 | -2.3928881E-04 | -9.7025911E-04 | 3.0852927E-05  |
| 25 Q35 | -2.0858900E-02 | -1.9400880E-02 | -3.8361256E-03 | 1.4824065E-02  |
| 26 Q36 | -1.9074857E-02 | -1.7217180E-02 | -1.5002014E-03 | 1.3229406E-02  |
| 27 Q37 | 1.5977943E-02  | 4.6833932E-03  | 3.5509278E-02  | -9.6246918E-03 |
| 28 Q38 | 1.4419383E-02  | 7.9321896E-03  | -3.4336983E-02 | -9.2394166E-03 |
| 29 P40 | 4.1426280E-01  | 3.4378535E-01  | -2.7598543E-02 | -4.1358179E-01 |
| 30 P41 | 3.2906871E-02  | 2.6841262E-02  | -1.1920030E-02 | -3.7369961E-02 |
| 31 P42 | -2.5663842E-01 | -2.2842003E-01 | -5.6009497E-02 | 2.4606936E-01  |
| 32 P43 | -1.1374628E 00 | -1.0081713E 00 | -1.0088051E-01 | 9.1509953E-01  |
| 33 P44 | -1.1368941E 00 | -1.0076672E 00 | -1.0083009E-01 | 9.1464195E-01  |
| 34 P45 | -1.4860886E 00 | -1.4549360E 00 | -1.1313362E 00 | -7.3434301E-01 |
| 35 P46 | -1.8353008E 00 | -1.9022274E 00 | -2.1618947E 00 | -2.3834119E 00 |
| 36 P47 | -2.1634412E 00 | -2.3225287E 00 | -3.1302679E 00 | -3.9329736E 00 |
| 37 P48 | -2.4915814E 00 | -2.7428300E 00 | -4.0986412E 00 | -5.4825357E 00 |
| 38 P49 | -2.4915815E 00 | -2.7428301E 00 | -4.0986412E 00 | -5.4825357E 00 |
| 39 P50 | -4.3965951E-01 | -3.6294893E-01 | 3.9381608E-02  | 4.5464278E-01  |
| 40 P51 | -1.8240678E-02 | -1.4738272E-02 | 1.5800025E-02  | 4.3047820E-02  |
| 41 P52 | 2.5883887E-01  | 1.9942957E-01  | -4.6964837E-02 | -2.4284099E-01 |
| 42 P53 | 1.4462475E 00  | 1.2819287E 00  | 1.2842197E-01  | -1.1632198E 00 |
| 43 P54 | 1.2178766E 00  | 1.0795047E 00  | 1.0814340E-01  | -9.7954065E-01 |
| 44 P55 | -5.3621415E-01 | -5.6973012E-01 | -9.1772647E-01 | -1.3440551E 00 |
| 45 P56 | -2.2903984E 00 | -2.2190529E 00 | -1.9436511E 00 | -1.7085889E 00 |
| 46 P57 | -2.1829787E 00 | -2.1149794E 00 | -1.8524939E 00 | -1.6284561E 00 |
| 47 P58 | -3.7541777E 00 | -3.5922098E 00 | -2.7712106E 00 | -1.9546803E 00 |
| 48 P59 | -5.3253770E 00 | -5.0694407E 00 | -3.6899271E 00 | -2.2809046E 00 |
| 49 P60 | -5.3253770E 00 | -5.0694407E 00 | -3.6899271E 00 | -2.2809046E 00 |
| 50 P62 | -3.0816849E-02 | -2.6458083E-02 | -1.7535936E-03 | 2.9387532E-02  |

| (GIM)  | P112           | P113           | P114           | P115           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | -3.0810671E-02 | -2.6452779E-02 | -1.7532424E-03 | 2.9381641E-02  |
| 52 P64 | 3.9965534E-03  | 3.4312770E-03  | 2.2741880E-04  | -3.8111892E-03 |
| 53 P67 | -1.8002369E-02 | -2.6339750E-02 | -3.9711396E-02 | 1.1654294E-02  |
| 54 P68 | -1.7998763E-02 | -2.6334473E-02 | -3.9703440E-02 | 1.1651960E-02  |
| 55 P69 | 2.3346784E-03  | 3.4159308E-03  | 5.1500633E-03  | -1.5114137E-03 |
| 56 P72 | 4.5867393E-02  | 6.0567301E-02  | 7.6999164E-02  | -4.3755827E-02 |
| 57 P73 | 4.5858204E-02  | 6.0555164E-02  | 7.6983735E-02  | -4.3747057E-02 |
| 58 P74 | -5.9484184E-03 | -7.8548093E-03 | -9.9858129E-03 | 5.6745746E-03  |
| 59 P77 | -8.5506967E-02 | 4.5429553E-01  | 9.4248605E-02  | -3.7271213E-02 |
| 60 P79 | -4.7167897E-02 | 1.2761374E-01  | 1.2168650E 00  | 7.2840340E-03  |
| 61 P80 | -4.7158439E-02 | 1.2758817E-01  | 1.2166211E 00  | 7.2825755E-03  |
| 62 P81 | 6.1170780E-03  | -1.6549880E-02 | 3.4218805E-01  | -9.4464769E-04 |
| 63 P82 | 3.4578868E-02  | 3.0648407E-02  | 3.0667651E-03  | 4.7218099E-01  |
| 64 P83 | 0.             | 0.             | 0.             | -0.            |
| 65 P84 | 0.             | 0.             | 0.             | -0.            |
| 66 P93 | -5.7688802E-02 | -4.9111850E-02 | -2.6864260E-03 | 4.7430996E-02  |
| 67 P94 | -1.4770590E-02 | -1.2134554E-02 | -3.5699218E-04 | 2.9921667E-03  |
| 68 P95 | 4.0096442E-02  | 5.4153872E-02  | 7.0499508E-02  | -4.1579670E-02 |
| 69 P96 | 1.7559942E-01  | 2.2491800E-01  | 5.1821055E-01  | 8.2922498E-01  |
| 70 P97 | 6.8410863E-01  | 6.9898868E-01  | 6.3683395E-01  | 4.9875257E-01  |
| 71 Q19 | -2.0774399E-02 | -1.7161372E-02 | 1.7994436E-03  | 2.1386841E-02  |
| 72 Q20 | -2.3917029E-02 | -1.9836767E-02 | 1.6530990E-03  | 2.3970670E-02  |
| 73 Q21 | 1.1306931E-03  | 9.0516382E-04  | -1.8089813E-06 | -8.5250757E-04 |
| 74 Q22 | 3.4686863E-03  | 2.9195223E-03  | 1.2508820E-04  | -3.2733371E-03 |
| 75 Q23 | -4.6190906E-04 | -9.1323767E-04 | -1.6605360E-03 | 2.0838690E-04  |
| 76 Q24 | 2.5268332E-03  | 2.6976561E-03  | 2.1991920E-03  | -2.2195508E-03 |
| 77 Q26 | 1.5940920E-02  | 1.4106559E-02  | 4.3068565E-04  | -1.1011674E-02 |
| 78 Q28 | 7.5005220E-02  | 6.0818492E-02  | 9.4129105E-03  | -2.9643308E-02 |

| (GIM)  | P116           | P117           | P118           | P119           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 1.4312606E-04  | -9.8095711E-05 | 9.4438422E-05  | 8.7128311E-05  |
| 2 Q2   | -1.2079453E-02 | 1.3659461E-02  | -8.6621276E-03 | -7.6584541E-03 |
| 3 Q3   | -7.7117182E-03 | 9.2490606E-03  | -4.9548028E-03 | -4.4034427E-03 |
| 4 Q4   | -1.6880083E-02 | 1.5993157E-02  | -9.1961044E-03 | -8.4953566E-03 |
| 5 Q5   | -1.5125066E-02 | 1.2142996E-02  | -5.6287147E-03 | -7.6011399E-03 |
| 6 Q6   | -1.5125065E-02 | -8.8867110E-02 | -5.6287146E-03 | -7.6011398E-03 |
| 7 Q7   | -1.5125065E-02 | -8.8867110E-02 | -5.6287144E-03 | -7.6011396E-03 |
| 8 Q8   | -1.5125066E-02 | -8.8867109E-02 | -5.6287147E-03 | -7.6011401E-03 |
| 9 Q9   | 3.2693213E-10  | 1.5594289E-09  | 1.5423011E-10  | 1.6342340E-10  |
| 10 Q10 | -1.3568930E-04 | 9.2998670E-05  | -8.9531429E-05 | -8.2601153E-05 |
| 11 Q11 | -1.1981103E-02 | 1.3502026E-02  | -8.6119926E-03 | -7.6071076E-03 |
| 12 Q12 | -6.8618305E-03 | 8.7129254E-03  | -4.6496098E-03 | -3.9747705E-03 |
| 13 Q13 | -1.8181597E-02 | 1.7102489E-02  | -9.6967425E-03 | -9.1113071E-03 |
| 14 Q14 | -5.5706733E-02 | 3.5042964E-02  | -1.1201156E-02 | -2.5147273E-02 |
| 15 Q15 | 4.7386042E-02  | 3.5042967E-02  | -1.1201157E-02 | -2.5147275E-02 |
| 16 Q16 | 7.6753193E-02  | 3.5516013E-02  | 5.5235288E-02  | 7.9947778E-02  |
| 17 Q17 | 7.6753193E-02  | 3.5516014E-02  | 5.5235289E-02  | 7.9947778E-02  |
| 18 Q18 | -7.6441791E-10 | -1.6084957E-10 | -5.9837015E-10 | -3.8640090E-10 |
| 19 Q25 | 8.2093259E-03  | -6.7899789E-03 | 3.5264052E-03  | 3.5970727E-03  |
| 20 Q30 | 1.0878778E-02  | -2.3111258E-02 | 4.2114673E-02  | 1.5380058E-02  |
| 21 Q31 | -1.0366298E-02 | 1.1720404E-02  | -7.4563723E-03 | -6.5840894E-03 |
| 22 Q32 | -1.0873879E-02 | 1.2254487E-02  | -7.7927526E-03 | -6.8917473E-03 |
| 23 Q33 | 1.8537464E-03  | -1.2890614E-03 | 1.5632007E-03  | 1.4888044E-03  |
| 24 Q34 | 1.2710552E-03  | -9.9644785E-04 | 1.3911870E-03  | 1.2110198E-03  |
| 25 Q35 | -9.9262495E-03 | 7.9552026E-03  | -4.6881455E-03 | -4.6462677E-03 |
| 26 Q36 | -8.5576460E-03 | 6.8921160E-03  | -4.1904659E-03 | -3.9799370E-03 |
| 27 Q37 | -6.3106697E-04 | -3.0697031E-03 | 3.4785268E-03  | -2.3183529E-05 |
| 28 Q38 | 2.1807494E-03  | -3.6407816E-03 | 2.9439186E-03  | 1.0640080E-03  |
| 29 P40 | 2.7034751E-01  | -3.0528857E-01 | 1.9445162E-01  | 1.7215967E-01  |
| 30 P41 | 2.6151701E-02  | -3.0739329E-02 | 2.0259258E-02  | 1.7983409E-02  |
| 31 P42 | -1.1923760E-01 | 1.4146719E-01  | -6.2739474E-02 | -5.8348717E-02 |
| 32 P43 | -5.1833681E-01 | 5.0657667E-01  | -2.7161335E-01 | -2.5117317E-01 |
| 33 P44 | -5.1807765E-01 | 5.0632340E-01  | -2.7147754E-01 | -2.5104760E-01 |
| 34 P45 | -8.1584480E-01 | 7.4538265E-01  | -3.8229004E-01 | -4.0069122E-01 |
| 35 P46 | -1.1136271E 00 | -1.0042330E 00 | -4.9310817E-01 | -5.5034246E-01 |
| 36 P47 | -1.3934408E 00 | -2.6482744E 00 | -5.9723939E-01 | -6.9096357E-01 |
| 37 P48 | -1.6732545E 00 | -4.2923160E 00 | -7.0137060E-01 | -8.3158463E-01 |
| 38 P49 | -1.6732546E 00 | -4.2923160E 00 | -7.0137061E-01 | -8.3158466E-01 |
| 39 P50 | -2.8685060E-01 | 3.3465818E-01  | -2.0775907E-01 | -1.8334745E-01 |
| 40 P51 | -1.6535009E-02 | 3.2952148E-02  | -1.1279873E-02 | -1.1823311E-02 |
| 41 P52 | 9.4925089E-02  | -1.3315039E-01 | 6.2654148E-02  | 4.7695286E-02  |
| 42 P53 | 6.5907989E-01  | -6.4389607E-01 | 3.4532338E-01  | 3.1936040E-01  |
| 43 P54 | 5.5500734E-01  | -5.4222114E-01 | 2.9079481E-01  | 2.6893154E-01  |
| 44 P55 | 8.7445867E-01  | -7.9864048E-01 | 4.0975698E-01  | 4.2944992E-01  |
| 45 P56 | -9.3558843E-01 | -1.0550734E 00 | 5.2872551E-01  | 5.8997685E-01  |
| 46 P57 | -8.9170938E-01 | -1.0055905E 00 | 5.0392827E-01  | 5.6230692E-01  |
| 47 P58 | -2.5129009E 00 | -1.2350785E 00 | -1.2970461E 00 | -1.2012581E 00 |
| 48 P59 | -4.1340926E 00 | -1.4645665E 00 | -3.0980204E 00 | -2.9648231E 00 |
| 49 P60 | -4.1340926E 00 | -1.4645665E 00 | -3.0980205E 00 | -2.9648231E 00 |
| 50 P62 | -1.9725427E-02 | 2.1262997E-02  | -1.3425538E-02 | -1.2143958E-02 |

| (GIM)  | P116           | P117           | P118           | P119           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | -1.9721474E-02 | 2.1258734E-02  | -1.3422847E-02 | -1.2141524E-02 |
| 52 P64 | 2.5581371E-03  | -2.7575404E-03 | 1.7411216E-03  | 1.5749169E-03  |
| 53 P67 | -1.6303985E-02 | 7.9455488E-03  | -4.1269569E-03 | -7.3638389E-03 |
| 54 P68 | -1.6300719E-02 | 7.9439572E-03  | -4.1261301E-03 | -7.3623635E-03 |
| 55 P69 | 2.1144197E-03  | -1.0304367E-03 | 5.3521387E-04  | 9.5499635E-04  |
| 56 P72 | 3.9571347E-02  | -3.0561040E-02 | 1.3611308E-02  | 1.9400678E-02  |
| 57 P73 | 3.9563416E-02  | -3.0554915E-02 | 1.3608581E-02  | 1.9396790E-02  |
| 58 P74 | -5.1317008E-03 | 3.9633785E-03  | -1.7652137E-03 | -2.5160214E-03 |
| 59 P77 | 3.6527165E-01  | -1.1193245E-01 | -3.8234632E-02 | 1.4583091E-01  |
| 60 P79 | 1.0683686E-01  | -2.4164335E-02 | -1.7723082E-02 | 4.1478848E-02  |
| 61 P80 | 1.0681545E-01  | -2.4159496E-02 | -1.7719532E-02 | 4.1470536E-02  |
| 62 P81 | -1.3855383E-02 | 3.1338069E-03  | 2.2984591E-03  | -5.3792791E-03 |
| 63 P82 | 1.5757438E-02  | -1.5399938E-02 | 8.2570455E-03  | 7.6356642E-03  |
| 64 P83 | 0.             | -0.            | 0.             | 0.             |
| 65 P84 | 0.             | -0.            | 0.             | 0.             |
| 66 P93 | -3.7693458E-02 | 3.5619721E-02  | -2.6181530E-02 | -2.3564506E-02 |
| 67 P94 | -1.0457534E-02 | 3.9610867E-03  | -7.8067973E-03 | -6.9072006E-03 |
| 68 P95 | 3.3724555E-02  | -2.7740749E-02 | 1.0153868E-02  | 1.5752491E-02  |
| 69 P96 | 1.4973816E-01  | 8.7978438E-01  | 5.5724277E-02  | 7.5251287E-02  |
| 70 P97 | 7.4450607E-01  | 3.4450535E-01  | 5.3578234E-01  | 7.7549348E-01  |
| 71 Q19 | -1.3554439E-02 | 1.5748168E-02  | -9.8084131E-03 | -8.6595176E-03 |
| 72 Q20 | -1.5607811E-02 | 1.7688571E-02  | -1.1234666E-02 | -9.9432070E-03 |
| 73 Q21 | 6.6414618E-04  | -6.1165552E-04 | 4.8566206E-04  | 4.1671919E-04  |
| 74 Q22 | 2.1478380E-03  | -2.3362769E-03 | 1.4866357E-03  | 1.3241350E-03  |
| 75 Q23 | -1.6482747E-03 | 9.4346511E-04  | -1.0977896E-03 | -1.1907832E-03 |
| 76 Q24 | 7.5843243E-04  | -7.8341194E-04 | -1.1942797E-04 | 4.3545995E-05  |
| 77 Q26 | 6.3721620E-03  | -5.2787862E-03 | 2.9732676E-03  | 2.7389471E-03  |
| 78 Q28 | 4.0240835E-02  | -2.2628692E-02 | 5.4417282E-03  | 1.7375945E-02  |

| (GIM)  | P120           | P121           | P122           | P123           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 1.3250866E-05  | 1.8198966E-06  | -6.0454913E-05 | 3.6750973E-05  |
| 2 Q2   | 2.7480855E-04  | -1.9391982E-04 | 8.1285613E-03  | -3.1861510E-03 |
| 3 Q3   | 3.6400456E-04  | -1.1689215E-04 | 5.0981387E-03  | -1.7355830E-03 |
| 4 Q4   | -2.4215836E-04 | -2.0410873E-04 | 8.0242460E-03  | -3.1357966E-03 |
| 5 Q5   | -6.3324646E-04 | -1.9000605E-04 | 7.0619993E-03  | -3.1479214E-03 |
| 6 Q6   | -6.3324646E-04 | -1.9000605E-04 | 7.0619992E-03  | -3.1479214E-03 |
| 7 Q7   | -5.0506983E-02 | 1.0726202E-03  | -9.3948107E-02 | -3.1479213E-03 |
| 8 Q8   | -5.0506983E-02 | 1.0726202E-03  | -9.3948107E-02 | -3.1479214E-03 |
| 9 Q9   | 4.6463213E-10  | -7.5621325E-12 | 7.7089840E-10  | 6.3043951E-11  |
| 10 Q10 | -1.2562370E-05 | -1.7253351E-06 | 5.7313664E-05  | -3.4177777E-05 |
| 11 Q11 | 2.5817379E-04  | -1.9219042E-04 | 8.0418851E-03  | -3.1659963E-03 |
| 12 Q12 | 4.3817207E-04  | -1.0706572E-04 | 4.7743350E-03  | -1.5560244E-03 |
| 13 Q13 | -2.7958195E-04 | -2.1955028E-04 | 8.6122069E-03  | -3.3750950E-03 |
| 14 Q14 | -4.2924588E-03 | -6.2415545E-04 | 2.0985838E-02  | -1.0661291E-02 |
| 15 Q15 | -4.2924592E-03 | -6.2415552E-04 | 2.0985840E-02  | -1.0661292E-02 |
| 16 Q16 | 5.3964366E-02  | 6.2824852E-04  | 2.0420306E-02  | -9.5542485E-03 |
| 17 Q17 | 5.3964366E-02  | 8.2824851E-04  | 2.0420308E-02  | 9.3538531E-02  |
| 18 Q18 | -1.6366561E-10 | -1.9665118E-12 | -8.4021919E-11 | 2.9814790E-11  |
| 19 Q25 | 3.1725799E-04  | 8.3520685E-05  | -3.0653325E-03 | 1.2381985E-03  |
| 20 Q30 | -2.4229369E-03 | 2.6632170E-04  | -1.3208968E-02 | 6.3393881E-03  |
| 21 Q31 | 2.3324382E-04  | -1.6657463E-04 | 6.9795160E-03  | -2.7403544E-03 |
| 22 Q32 | 2.3658186E-04  | -1.7425331E-04 | 7.2938405E-03  | -2.8670487E-03 |
| 23 Q33 | 1.9703727E-04  | 3.2189830E-05  | -1.1066496E-03 | 6.9981211E-04  |
| 24 Q34 | 1.2833403E-04  | 2.6167190E-05  | -9.3143530E-04 | 5.8420016E-04  |
| 25 Q35 | -4.8532504E-04 | -1.0505151E-04 | 3.7692623E-03  | -1.6699256E-03 |
| 26 Q36 | -4.1985226E-04 | -8.8676745E-05 | 3.1715555E-03  | -1.4000999E-03 |
| 27 Q37 | -7.4374163E-04 | -5.9090971E-06 | -5.0442529E-04 | -3.9742172E-04 |
| 28 Q38 | -2.7741275E-04 | 2.0994398E-05  | -1.1276868E-03 | 1.4619334E-04  |
| 29 P40 | -5.9973760E-03 | 4.3565588E-03  | -1.8243799E-01 | 7.1815182E-02  |
| 30 P41 | -7.9318141E-04 | 4.5965990E-04  | -1.9409385E-02 | 7.7805930E-03  |
| 31 P42 | 6.2699337E-03  | -1.6056321E-03 | 7.1298130E-02  | -2.1163888E-02 |
| 32 P43 | -2.3574949E-03 | -6.1581565E-03 | 2.4704795E-01  | -9.0241179E-02 |
| 33 P44 | -2.3563236E-03 | -6.1550775E-03 | 2.4692442E-01  | -9.0196062E-02 |
| 34 P45 | -1.4823051E-02 | -9.8957264E-03 | 3.8595398E-01  | -1.5216918E-01 |
| 35 P46 | -2.7290433E-02 | -1.3636564E-02 | 5.2499059E-01  | -2.1414545E-01 |
| 36 P47 | -9.6166959E-01 | 6.2069075E-03  | -1.2130493E 00 | -2.7238201E-01 |
| 37 P48 | -1.8960489E 00 | 2.6050383E-02  | -2.9510892E 00 | -3.3061855E-01 |
| 38 P49 | -1.8960489E 00 | 2.6050383E-02  | -2.9510892E 00 | -3.3061856E-01 |
| 39 P50 | 9.1387542E-03  | -4.7047032E-03 | 1.9967922E-01  | -7.6531754E-02 |
| 40 P51 | 4.1296251E-03  | -3.9382617E-04 | 2.0079591E-02  | -5.2064601E-03 |
| 41 P52 | -9.7010962E-03 | 1.3499020E-03  | -6.4372150E-02 | 1.6121600E-02  |
| 42 P53 | 3.0574616E-03  | 7.8286043E-03  | -3.1400115E-01 | 1.1473928E-01  |
| 43 P54 | 2.5746711E-03  | 6.5924223E-03  | -2.6441854E-01 | 9.6621281E-02  |
| 44 P55 | 1.5967883E-02  | 1.0603721E-02  | -4.1348292E-01 | 1.6307931E-01  |
| 45 P56 | 2.9361789E-02  | 1.4615231E-02  | -5.6255521E-01 | 2.2954088E-01  |
| 46 P57 | 2.7984706E-02  | 1.3929778E-02  | -5.3617138E-01 | 2.1877542E-01  |
| 47 P58 | -9.2553170E-01 | -6.3197712E-03 | -6.6958113E-01 | 2.7825027E-01  |
| 48 P59 | -1.8790482E 00 | -2.6569319E-02 | -8.0299091E-01 | -1.5694912E 00 |
| 49 P60 | -1.8790482E 00 | -2.6569319E-02 | -8.0299091E-01 | -1.5694912E 00 |
| 50 P62 | 2.3282169E-04  | -3.0449734E-04 | 1.2564970E-02  | -5.0190297E-03 |

| (GIM)  | P120           | P121           | P122           | P123           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 2.3277496E-04  | -3.0443630E-04 | 1.2562452E-02  | -5.0180237E-03 |
| 52 P64 | -3.0194011E-05 | 3.9489434E-05  | -1.6295169E-03 | 6.5090436E-04  |
| 53 P67 | -1.9368943E-03 | -1.5971526E-04 | 4.5315911E-03  | -3.0106163E-03 |
| 54 P68 | -1.9365061E-03 | -1.5968326E-04 | 4.5306833E-03  | -3.0100131E-03 |
| 55 P69 | 2.5119057E-04  | 2.0713039E-05  | -5.8768978E-04 | 3.9043868E-04  |
| 56 P72 | 1.8855075E-03  | 4.8335086E-04  | -1.7690259E-02 | 8.0088463E-03  |
| 57 P73 | 1.8851296E-03  | 4.8325399E-04  | -1.7686714E-02 | 8.0072407E-03  |
| 58 P74 | -2.4452634E-04 | -6.2684461E-05 | 2.2942016E-03  | -1.0386455E-03 |
| 59 P77 | 5.2445937E-02  | 3.6336652E-03  | -9.4717460E-02 | 7.0023566E-02  |
| 60 P79 | 1.7225695E-02  | 1.0223159E-03  | -2.4178055E-02 | 2.0442654E-02  |
| 61 P80 | 1.7222244E-02  | 1.0221111E-03  | -2.4173210E-02 | 2.0438557E-02  |
| 62 P81 | -2.2339537E-03 | -1.3258137E-04 | 3.1355860E-03  | -2.6511523E-03 |
| 63 P82 | 7.1665973E-05  | 1.8720801E-04  | -7.5102648E-03 | 2.7433317E-03  |
| 64 P83 | -5.0624998E-01 | -1.2500000E-02 | -0.            | 0.             |
| 65 P84 | -4.9374998E-01 | 1.2500000E-02  | -0.            | 0.             |
| 66 P93 | -9.5961976E-04 | -5.5422605E-04 | 2.1486530E-02  | -9.7976252E-03 |
| 67 P94 | -1.9187019E-03 | -1.2008620E-04 | 2.9447691E-03  | -2.9312514E-03 |
| 68 P95 | 1.0420468E-03  | 4.1102973E-04  | -1.5604716E-02 | 6.4143738E-03  |
| 69 P96 | 5.0001913E-01  | -1.0618940E-02 | 9.3008623E-01  | 3.1164423E-02  |
| 70 P97 | 5.2345436E-01  | 8.0340102E-03  | 1.9807699E-01  | 9.0732379E-01  |
| 71 Q19 | 4.1494470E-04  | -2.2180937E-04 | 9.3982234E-03  | -3.6143010E-03 |
| 72 Q20 | 3.6266889E-04  | -2.5200114E-04 | 1.0568714E-02  | -4.1480320E-03 |
| 73 Q21 | 2.3848795E-05  | 9.4705852E-06  | -3.5970958E-04 | 1.7057087E-04  |
| 74 Q22 | -2.8397731E-05 | 3.3120591E-05  | -1.3697822E-03 | 5.4462035E-04  |
| 75 Q23 | -2.0876113E-04 | -2.5502691E-05 | 8.2409765E-04  | -5.5840257E-04 |
| 76 Q24 | -4.7481863E-05 | 3.4285012E-06  | -1.8633846E-04 | -4.9323356E-05 |
| 77 Q26 | 2.6049190E-04  | 6.1129614E-05  | -2.2152570E-03 | 8.8877196E-04  |
| 78 Q28 | 3.6440410E-03  | 4.2995270E-04  | -1.3769044E-02 | 7.4437956E-03  |

| (GIM)  | P124           | P125           | P126           |
|--------|----------------|----------------|----------------|
| 1 Q1   | -2.6329719E-05 | -7.8484281E-06 | 5.4978136E-06  |
| 2 Q2   | 3.4755163E-03  | 7.0377455E-04  | -7.3394784E-04 |
| 3 Q3   | 2.0959063E-03  | 3.8911858E-04  | -4.5267804E-04 |
| 4 Q4   | 3.0814891E-03  | 7.0689472E-04  | -6.9640230E-04 |
| 5 Q5   | 2.9815153E-03  | 6.0376065E-04  | -6.3455271E-04 |
| 6 Q6   | 2.9815153E-03  | 6.0376064E-04  | -6.3455270E-04 |
| 7 Q7   | 2.9815152E-03  | 6.0376062E-04  | -6.3455268E-04 |
| 8 Q8   | -9.8028587E-02 | 6.0376065E-04  | -6.3455271E-04 |
| 9 Q9   | -6.3961616E-11 | -1.3307531E-11 | 5.0505050E-02  |
| 10 Q10 | 2.4961620E-05  | 7.4406270E-06  | -5.2121468E-06 |
| 11 Q11 | 3.4400789E-03  | 6.9948818E-04  | -7.2625363E-04 |
| 12 Q12 | 1.9463592E-03  | 3.5514047E-04  | -4.2335129E-04 |
| 13 Q13 | 3.3201810E-03  | 7.5479400E-04  | -7.4813058E-04 |
| 14 Q14 | 9.0034767E-03  | 1.8038462E-03  | -1.8973545E-03 |
| 15 Q15 | 9.0034776E-03  | 1.8038464E-03  | -1.8973546E-03 |
| 16 Q16 | 8.5657085E-03  | 1.7442110E-03  | -1.8303344E-03 |
| 17 Q17 | 8.5657088E-03  | 1.7442111E-03  | -1.8303344E-03 |
| 18 Q18 | -3.3218867E-11 | -5.1546389E-02 | 7.3661843E-12  |
| 19 Q25 | -1.0850016E-03 | -2.7416817E-04 | 2.5840343E-04  |
| 20 Q30 | -5.5218283E-03 | -1.1273909E-03 | 1.1824179E-03  |
| 21 Q31 | 2.9853458E-03  | 6.0551826E-04  | -6.3028919E-04 |
| 22 Q32 | 3.1189310E-03  | 6.3321441E-04  | -6.5860432E-04 |
| 23 Q33 | -5.5172379E-04 | -1.4534504E-04 | 1.0631854E-04  |
| 24 Q34 | -4.7655725E-04 | -1.2424325E-04 | 9.0477546E-05  |
| 25 Q35 | 1.3884144E-03  | 3.6907679E-04  | -3.2216127E-04 |
| 26 Q36 | 1.1409337E-03  | 3.1695389E-04  | -2.6885081E-04 |
| 27 Q37 | 9.0245564E-05  | -4.7853031E-05 | 2.0635540E-05  |
| 28 Q38 | -2.4181194E-04 | -1.0671647E-04 | 8.2250626E-05  |
| 29 P40 | -7.8181697E-02 | -1.5841480E-02 | 1.6487186E-02  |
| 30 P41 | -8.5572277E-03 | -1.6957658E-03 | 1.7735640E-03  |
| 31 P42 | 2.7503353E-02  | 4.7848773E-03  | -6.1949143E-03 |
| 32 P43 | 9.3042173E-02  | 2.0513502E-02  | -2.1281605E-02 |
| 33 P44 | 9.2995671E-02  | 2.0503246E-02  | -2.1270958E-02 |
| 34 P45 | 1.5169275E-01  | 3.2389481E-02  | -3.3763404E-02 |
| 35 P46 | 2.1039282E-01  | 4.4276320E-02  | -4.6256480E-02 |
| 36 P47 | 2.6555087E-01  | 5.5445893E-02  | -5.7995685E-02 |
| 37 P48 | -1.5479780E 00 | 6.6615463E-02  | -6.9734946E-02 |
| 38 P49 | -1.5479781E 00 | 6.6615465E-02  | 1.1423863E 00  |
| 39 P50 | 8.5498849E-02  | 1.6899454E-02  | -1.8039487E-02 |
| 40 P51 | 8.6941911E-03  | 1.1275746E-03  | -1.8218946E-03 |
| 41 P52 | -2.4084697E-02 | -4.0856007E-03 | 5.5323094E-03  |
| 42 P53 | -1.1825362E-01 | -2.6081569E-02 | 2.7048835E-02  |
| 43 P54 | -9.9580687E-02 | -2.1963138E-02 | 2.2777667E-02  |
| 44 P55 | -1.6249986E-01 | -3.4713302E-02 | 3.6170609E-02  |
| 45 P56 | -2.2542237E-01 | -4.7464127E-02 | 4.7564261E-02  |
| 46 P57 | -2.1485007E-01 | -4.5238075E-02 | 4.7239699E-02  |
| 47 P58 | -2.7116185E-01 | -5.6649231E-02 | 5.9226151E-02  |
| 48 P59 | -3.2747363E-01 | -6.8060404E-02 | 7.1212605E-02  |
| 49 P60 | -3.2747363E-01 | 1.1690530E 00  | 7.1212605E-02  |
| 50 P62 | 5.3519430E-03  | 1.1012258E-03  | -1.1328563E-03 |



| (GIM)  | P124           | P125           | P126           |
|--------|----------------|----------------|----------------|
| 51 P63 | 5.3508701E-03  | 1.1010050E-03  | -1.1326292E-03 |
| 52 P64 | -6.9407895E-04 | -1.4281498E-04 | 1.4691706E-04  |
| 53 P67 | 1.8920496E-03  | 5.3760779E-04  | -4.0546458E-04 |
| 54 P68 | 1.8916706E-03  | 5.3750007E-04  | -4.0538336E-04 |
| 55 P69 | -2.4537480E-04 | -6.9720898E-05 | 5.2583605E-05  |
| 56 P72 | -7.4489744E-03 | -1.5135324E-03 | 1.5879460E-03  |
| 57 P73 | -7.4474820E-03 | -1.5132290E-03 | 1.5876277E-03  |
| 58 P74 | 9.6603733E-04  | 1.9628590E-04  | -2.0593641E-04 |
| 59 P77 | -4.7001072E-02 | -8.4968108E-03 | 9.0817835E-03  |
| 60 P79 | -1.2604628E-02 | -2.2836412E-03 | 2.3676815E-03  |
| 61 P80 | -1.2602102E-02 | -2.2831838E-03 | 2.3672071E-03  |
| 62 P81 | 1.6346599E-03  | 2.9615923E-04  | -3.0705818E-04 |
| 63 P82 | -2.8284861E-03 | -6.2361044E-04 | 6.4695848E-04  |
| 64 P83 | -0.            | -0.            | 0.             |
| 65 P84 | -0.            | -0.            | 0.             |
| 66 P93 | 9.2539917E-03  | 2.1498633E-03  | -1.9455315E-03 |
| 67 P94 | 1.3950349E-03  | 6.4337591E-04  | -2.7696523E-04 |
| 68 P95 | -6.4630492E-03 | -1.1874059E-03 | 1.3919639E-03  |
| 69 P96 | 9.7048302E-01  | -5.9772306E-03 | 5.0628205E-01  |
| 70 P97 | 8.3087378E-02  | 5.1691884E-01  | -1.7754244E-02 |
| 71 Q19 | 4.0245618E-03  | 7.9798999E-04  | -8.4909172E-04 |
| 72 Q20 | 4.5286780E-03  | 9.1510496E-04  | -9.5507562E-04 |
| 73 Q21 | -1.5281062E-04 | -3.8313706E-05 | 3.2398477E-05  |
| 74 Q22 | -5.8093160E-04 | -1.2038043E-04 | 1.2329454E-04  |
| 75 Q23 | 4.1312392E-04  | 1.1129376E-04  | -7.9357772E-05 |
| 76 Q24 | -1.4925275E-05 | 1.1566570E-05  | 1.1552908E-05  |
| 77 Q26 | -7.3292341E-04 | -2.0948357E-04 | 1.8257543E-04  |
| 78 Q28 | -5.9573115E-03 | -1.1865606E-03 | 1.2489493E-03  |

APPLIED-LOAD CONDITIONS  
CONFIGURATION 3-C SYMMETRIC

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| (PMC) | PLAFO          | PLAFP          | PLAAO          | PLAAP          |
|-------|----------------|----------------|----------------|----------------|
| P100  | 1.3406978E 02  | 1.3035559E 02  | 1.3133965E 02  | 1.2754252E 02  |
| P101  | 3.1077191E 02  | 3.0198749E 02  | 3.0398934E 02  | 2.9486027E 02  |
| P102  | 3.4835612E 02  | 3.3225394E 02  | 3.3716263E 02  | 3.2064232E 02  |
| P103  | 5.2053371E 02  | 5.0225623E 02  | 5.0655969E 02  | 4.8766904E 02  |
| P104  | 4.5492065E 02  | 4.4287940E 02  | 4.4641882E 02  | 4.3409442E 02  |
| P105  | 2.6623287E 02  | 2.5920228E 02  | 2.6280769E 02  | 2.5586171E 02  |
| P106  | 7.1312156E 02  | 6.9147972E 02  | 6.9660019E 02  | 6.7427473E 02  |
| P107  | 7.0400949E 02  | 6.8962449E 02  | 6.9388526E 02  | 6.7919819E 02  |
| P108  | 7.2260541E 02  | 7.1663372E 02  | 7.1887834E 02  | 7.1284213E 02  |
| P109  | 7.7732114E 02  | 7.5452998E 02  | 7.5943971E 02  | 7.3603630E 02  |
| P110  | 8.1978798E 02  | 8.0225682E 02  | 8.0792092E 02  | 7.9022744E 02  |
| P111  | 7.9236098E 02  | 7.8094801E 02  | 7.8629667E 02  | 7.7493370E 02  |
| P112  | -1.5812000E 01 | -1.5464000E 01 | -1.5812000E 01 | -1.5374000E 01 |
| P113  | 9.7658391E 02  | 9.4952909E 02  | 9.5452347E 02  | 9.2666159E 02  |
| P114  | 7.4854465E 02  | 7.2766415E 02  | 7.3512257E 02  | 7.1435670E 02  |
| P115  | 1.9577304E 02  | 1.7782712E 02  | 1.8994692E 02  | 1.7242627E 02  |
| P116  | 1.2252333E 03  | 1.1878441E 03  | 1.1953461E 03  | 1.1566606E 03  |
| P117  | -5.8219758E 01 | -5.5432627E 01 | -5.2786074E 01 | -4.9278355E 01 |
| P118  | 5.1444755E 02  | 4.9112341E 02  | 5.0179825E 02  | 4.7736750E 02  |
| P119  | -3.1538713E 02 | -3.0233288E 02 | -3.2136056E 02 | -3.0698248E 02 |
| P120  | 1.9659420E 03  | 1.8141998E 03  | 1.8850341E 03  | 1.7467346E 03  |
| P121  | -1.7064437E 04 | -1.6607418E 04 | -1.7982217E 04 | -1.7573250E 04 |
| P122  | -2.3805785E 02 | -2.5428169E 02 | -2.3735538E 02 | -2.5189947E 02 |
| P123  | 7.3484154E 02  | 7.0746918E 02  | 7.1150115E 02  | 6.8342858E 02  |
| P124  | -1.2781035E 02 | -1.3608036E 02 | -1.3074072E 02 | -1.3869974E 02 |
| P125  | 0.             | 0.             | 0.             | 0.             |
| P126  | 0.             | 0.             | 0.             | 0.             |

| (PMC) | NMAFO          | NMAFP          | NMAAO          | NMAAP          |
|-------|----------------|----------------|----------------|----------------|
| P100  | -4.0608690E 01 | -3.3180381E 01 | -3.8948097E 01 | -3.1353857E 01 |
| P101  | -1.4527413E 02 | -1.2770540E 02 | -1.4114864E 02 | -1.2289055E 02 |
| P102  | -3.2400430E 02 | -2.9180008E 02 | -3.1719584E 02 | -2.8415532E 02 |
| P103  | -3.6349609E 02 | -3.2694146E 02 | -3.5499644E 02 | -3.1721528E 02 |
| P104  | -1.0470605E 02 | -8.0623641E 01 | -9.9534812E 01 | -7.4886000E 01 |
| P105  | 5.7135196E 01  | 7.1196533E 01  | 5.9218616E 01  | 7.3110681E 01  |
| P106  | -3.5352986E 02 | -3.1024640E 02 | -3.4348074E 02 | -2.9882995E 02 |
| P107  | -2.7734463E 00 | 2.5996318E 01  | 3.3845680E 00  | 3.2758653E 01  |
| P108  | 3.3412897E 02  | 3.4607202E 02  | 3.3639588E 02  | 3.4846826E 02  |
| P109  | -3.6791450E 02 | -3.2233232E 02 | -3.5703816E 02 | -3.1023121E 02 |
| P110  | 3.4002641E 01  | 6.9064430E 01  | 4.1220726E 01  | 7.6607361E 01  |
| P111  | 3.0810958E 02  | 3.3093456E 02  | 3.1179812E 02  | 3.3452321E 02  |
| P112  | 7.9060000E 00  | 7.2100000E 00  | 7.9060000E 00  | 7.0300000E 00  |
| P113  | -4.5091276E 02 | -3.9680383E 02 | -4.3749459E 02 | -3.8177120E 02 |
| P114  | -2.1327916E 01 | 2.0433185E 01  | -1.3163823E 01 | 2.8368000E 01  |
| P115  | 4.1629810E 01  | 7.7522518E 01  | 4.5173854E 01  | 8.0215724E 01  |
| P116  | -6.9289255E 02 | -6.1811487E 02 | -6.7471374E 02 | -5.9734293E 02 |
| P117  | 3.4464250E 02  | 3.3906748E 02  | 3.4133743E 02  | 3.3432070E 02  |
| P118  | -5.0230954E 02 | -4.5566193E 02 | -4.9461545E 02 | -4.4575480E 02 |
| P119  | 9.4904222E 01  | 6.8796599E 01  | 9.8537455E 01  | 6.9782156E 01  |
| P120  | 6.7180947E 02  | 9.7529254E 02  | 7.2102154E 02  | 9.9762020E 02  |
| P121  | -6.1496821E 04 | -6.2410886E 04 | -6.0938584E 04 | -6.1756526E 04 |
| P122  | 2.3853601E 02  | 2.7098613E 02  | 2.3810837E 02  | 2.6719913E 02  |
| P123  | -6.3075596E 02 | -5.7601159E 02 | -6.1655923E 02 | -5.6041432E 02 |
| P124  | -1.5034183E 02 | -1.3380156E 02 | -1.4855912E 02 | -1.3264090E 02 |
| P125  | 0.             | 0.             | 0.             | 0.             |
| P126  | 0.             | 0.             | 0.             | 0.             |

| (PMC) | PHAFO          | PHAFP          | PHAAO          | PHAAP          |
|-------|----------------|----------------|----------------|----------------|
| P100  | 5.0310909E 01  | 4.6335179E 01  | 4.8827672E 01  | 4.4869198E 01  |
| P101  | 2.2235310E 02  | 2.0937038E 02  | 2.1721059E 02  | 2.0369737E 02  |
| P102  | 4.3019710E 02  | 4.0067639E 02  | 4.1990128E 02  | 3.8946514E 02  |
| P103  | 4.6672062E 02  | 4.3808126E 02  | 4.5544407E 02  | 4.2589549E 02  |
| P104  | 3.1406070E 02  | 2.9223109E 02  | 3.0622216E 02  | 2.8386471E 02  |
| P105  | 2.3134688E 02  | 2.1052572E 02  | 2.2529767E 02  | 2.0416994E 02  |
| P106  | 6.8106341E 02  | 6.3950381E 02  | 6.6474108E 02  | 6.2179523E 02  |
| P107  | 4.0076670E 02  | 3.7278724E 02  | 3.9067952E 02  | 3.6205393E 02  |
| P108  | 1.4817798E 02  | 1.3609164E 02  | 1.4432593E 02  | 1.3204562E 02  |
| P109  | 7.5649976E 02  | 7.1117187E 02  | 7.3819389E 02  | 6.9154491E 02  |
| P110  | 4.4556090E 02  | 4.1089633E 02  | 4.3355189E 02  | 3.9846764E 02  |
| P111  | 2.4987668E 02  | 2.2490267E 02  | 2.4297712E 02  | 2.1779810E 02  |
| P112  | -1.5812000E 01 | -1.5116000E 01 | -1.5812000E 01 | -1.4936000E 01 |
| P113  | 9.7162821E 02  | 9.1618340E 02  | 9.4844809E 02  | 8.9114237E 02  |
| P114  | 4.6361185E 02  | 4.2151886E 02  | 4.4974277E 02  | 4.0771447E 02  |
| P115  | 8.8865839E 01  | 5.2813569E 01  | 8.3045601E 01  | 4.7595549E 01  |
| P116  | 1.2855143E 03  | 1.2113041E 03  | 1.2550557E 03  | 1.1780286E 03  |
| P117  | -1.9612425E 02 | -1.9776212E 02 | -1.9349194E 02 | -1.9391064E 02 |
| P118  | 8.1795768E 02  | 7.6566417E 02  | 8.0267930E 02  | 7.4784402E 02  |
| P119  | -1.6845206E 02 | -1.4775859E 02 | -1.7679002E 02 | -1.5370622E 01 |
| P120  | 6.9929385E 02  | 3.9093182E 02  | 6.1483752E 02  | 3.3198678E 02  |
| P121  | 3.0363035E 04  | 3.1905187E 04  | 2.9676881E 04  | 3.1139033E 04  |
| P122  | -2.4769783E 02 | -2.8533037E 02 | -2.4909537E 02 | -2.8355449E 02 |
| P123  | 1.0893828E 03  | 1.0268359E 03  | 1.0621349E 03  | 9.9778512E 02  |
| P124  | 1.2429244E 02  | 1.0369276E 02  | 1.1975521E 02  | 9.9490452E 01  |
| P125  | 0.             | 0.             | 0.             | 0.             |
| P126  | 0.             | 0.             | 0.             | 0.             |

| (PMC) | NHAFO          | NHAF P         | NHAAO          | NHAAP          |
|-------|----------------|----------------|----------------|----------------|
| P100  | -5.3483811E 01 | -4.6623455E 01 | -5.2295817E 01 | -4.5217475E 01 |
| P101  | -1.1994611E 02 | -1.0601006E 02 | -1.1729603E 02 | -1.0275145E 02 |
| P102  | -1.6522441E 02 | -1.4061595E 02 | -1.6102595E 02 | -1.3590193E 02 |
| P103  | -2.8150938E 02 | -2.4785428E 02 | -2.7522339E 02 | -2.4024951E 02 |
| P104  | -1.6528889E 02 | -1.4252287E 02 | -1.6133336E 02 | -1.3796272E 02 |
| P105  | -4.0911946E 01 | -2.7575152E 02 | -3.9191654E 01 | -2.6158108E 02 |
| P106  | -3.6893263E 02 | -3.2428989E 02 | -3.6051199E 02 | -3.1423067E 02 |
| P107  | -2.0831729E 02 | -1.7940528E 02 | -2.0327121E 02 | -1.7363655E 02 |
| P108  | -6.1555934E 01 | -5.0687671E 01 | -5.9884428E 01 | -4.8921430E 01 |
| P109  | -4.0684825E 02 | -3.5839159E 02 | -3.9745766E 02 | -3.4742393E 02 |
| P110  | -2.2040060E 02 | -1.8582204E 02 | -2.1458743E 02 | -1.7959538E 02 |
| P111  | -4.4888365E 01 | -2.7922871E 01 | -4.2840655E 01 | -2.6322255E 01 |
| P112  | 7.9060000E 00  | 7.2100000E 00  | 7.9060000E 00  | 7.0300000E 00  |
| P113  | -4.9283848E 02 | -4.3638449E 02 | -4.8142689E 02 | -4.2302824E 02 |
| P114  | -2.1751013E 02 | -1.7668448E 02 | -2.1098598E 02 | -1.7032768E 02 |
| P115  | 5.2981510E 01  | 7.9255105E 01  | 5.4218580E 01  | 7.9092609E 01  |
| P116  | -6.5470498E 02 | -5.7889363E 02 | -6.3966550E 02 | -5.6090509E 02 |
| P117  | 7.3632438E 01  | 7.7706692E 01  | 7.2750142E 01  | 7.5805259E 01  |
| P118  | -4.2807599E 02 | -3.7365410E 02 | -4.2031698E 02 | -3.6317871E 02 |
| P119  | 6.4638062E 01  | 4.6033822E 01  | 6.9023184E 01  | 4.8199064E 01  |
| P120  | -1.3232655E 02 | 1.5514116E 02  | -9.4737227E 01 | 1.6552061E 02  |
| P121  | -1.3415923E 04 | -1.5127827E 04 | -1.3110532E 04 | -1.4756239E 04 |
| P122  | 1.0377014E 02  | 1.4345277E 02  | 1.0478137E 02  | 1.4145685E 02  |
| P123  | -6.2559142E 02 | -5.5451016E 02 | -6.1098439E 02 | -5.3740286E 02 |
| P124  | -2.0256122E 01 | -3.8359408E 00 | -1.8733199E 01 | -2.9882984E 00 |
| P125  | 0.             | 0.             | 0.             | 0.             |
| P126  | 0.             | 0.             | 0.             | 0.             |

## DEFLECTIONS OF REDUNDANT STRUCTURE

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| (APC) | PLAFO          | PLAFP          | PLAAO          | PLAAP          |
|-------|----------------|----------------|----------------|----------------|
| P100  | 9.0812235E 00  | 8.8122876E 00  | 8.8992260E 00  | 8.6284841E 00  |
| P101  | 9.1405716E 00  | 8.8699960E 00  | 8.9593982E 00  | 8.6871628E 00  |
| P102  | 9.1954859E 00  | 8.9233931E 00  | 9.0150753E 00  | 8.7414579E 00  |
| P103  | 7.6108010E 00  | 7.3849841E 00  | 7.4583710E 00  | 7.2312263E 00  |
| P104  | 7.6486958E 00  | 7.4220193E 00  | 7.4972115E 00  | 7.2693281E 00  |
| P105  | 7.6974159E 00  | 7.4695210E 00  | 7.5465879E 00  | 7.3176040E 00  |
| P106  | 6.1309002E 00  | 5.9482181E 00  | 6.0068972E 00  | 5.8232524E 00  |
| P107  | 6.1937368E 00  | 6.0096459E 00  | 6.0708151E 00  | 5.8859177E 00  |
| P108  | 6.2611494E 00  | 6.0753542E 00  | 6.1390860E 00  | 5.9526413E 00  |
| P109  | 4.7046319E 00  | 4.5632608E 00  | 4.6076402E 00  | 4.4656087E 00  |
| P110  | 4.8018020E 00  | 4.6580163E 00  | 4.7057931E 00  | 4.5615416E 00  |
| P111  | 4.8992480E 00  | 4.7529377E 00  | 4.8041515E 00  | 4.6575677E 00  |
| P112  | 3.3542639E 00  | 3.2519749E 00  | 3.2823461E 00  | 3.1796042E 00  |
| P113  | 3.3984565E 00  | 3.2949762E 00  | 3.3262746E 00  | 3.2223723E 00  |
| P114  | 3.5525559E 00  | 3.4449544E 00  | 3.4805796E 00  | 3.3727597E 00  |
| P115  | 3.6354994E 00  | 3.5257708E 00  | 3.5651884E 00  | 3.4554757E 00  |
| P116  | 2.1727515E 00  | 2.1054876E 00  | 2.1252316E 00  | 2.0577792E 00  |
| P117  | 2.3545367E 00  | 2.2822840E 00  | 2.3090820E 00  | 2.2370351E 00  |
| P118  | 1.1005170E 00  | 1.0655600E 00  | 1.0752137E 00  | 1.0402053E 00  |
| P119  | 1.1649402E 00  | 1.1281047E 00  | 1.1385264E 00  | 1.1016536E 00  |
| P120  | 1.2424861E 00  | 1.2033721E 00  | 1.2165062E 00  | 1.1774950E 00  |
| P121  | -1.5188658E-03 | -1.4741381E-03 | -1.5375080E-03 | -1.4962298E-03 |
| P122  | 1.3040002E 00  | 1.2630747E 00  | 1.2787752E 00  | 1.2380923E 00  |
| P123  | 4.7179793E-01  | 4.5671746E-01  | 4.6091741E-01  | 4.4583450E-01  |
| P124  | 5.3423061E-01  | 5.1723215E-01  | 5.2387156E-01  | 5.0700130E-01  |
| P125  | -9.8324813E-02 | -9.5186007E-02 | -9.6056454E-02 | -9.2915932E-02 |
| P126  | -1.1581878E-01 | -1.1216268E-01 | -1.1357532E-01 | -1.0994318E-01 |

| (APC) | NMAFO          | NMAFP          | NMAAO          | NMAAP          |
|-------|----------------|----------------|----------------|----------------|
| P100  | -1.7689141E 00 | -1.2310456E 00 | -1.6582141E 00 | -1.1167318E 00 |
| P101  | -1.6602095E 00 | -1.1190615E 00 | -1.5500111E 00 | -1.0055414E 00 |
| P102  | -1.5596258E 00 | -1.0154432E 00 | -1.4498914E 00 | -9.0265751E-01 |
| P103  | -1.4373486E 00 | -9.8571731E-01 | -1.3446332E 00 | -8.9034523E-01 |
| P104  | -1.3441161E 00 | -8.9076583E-01 | -1.2519759E 00 | -7.9621015E-01 |
| P105  | -1.2561522E 00 | -8.0036570E-01 | -1.1644121E 00 | -7.0644524E-01 |
| P106  | -1.1858755E 00 | -8.2051336E-01 | -1.1104508E 00 | -7.4316207E-01 |
| P107  | -1.0615258E 00 | -6.9334614E-01 | -9.8675867E-01 | -6.1696494E-01 |
| P108  | -9.4327658E-01 | -5.7168816E-01 | -8.6903164E-01 | -4.9614312E-01 |
| P109  | -9.7069708E-01 | -6.8795648E-01 | -9.1170201E-01 | -6.2763987E-01 |
| P110  | -8.1809766E-01 | -5.3052790E-01 | -7.5970037E-01 | -4.7119792E-01 |
| P111  | -6.6869224E-01 | -3.7607298E-01 | -6.1084985E-01 | -3.1768315E-01 |
| P112  | -8.0519676E-01 | -6.0061995E-01 | -7.6145284E-01 | -5.5596945E-01 |
| P113  | -7.7864305E-01 | -5.7168348E-01 | -7.3473850E-01 | -5.2693436E-01 |
| P114  | -6.1741957E-01 | -4.0221757E-01 | -5.7364002E-01 | -3.5800079E-01 |
| P115  | -4.3734475E-01 | -2.1788872E-01 | -3.9457814E-01 | -1.7515327E-01 |
| P116  | -5.3712256E-01 | -4.0259564E-01 | -5.0821869E-01 | -3.7331415E-01 |
| P117  | -2.3777232E-01 | -9.3267543E-02 | -2.1012454E-01 | -6.6031001E-02 |
| P118  | -3.1404471E-01 | -2.4413107E-01 | -2.9865395E-01 | -2.2863746E-01 |
| P119  | -3.1277536E-01 | -2.3910480E-01 | -2.9670918E-01 | -2.2296387E-01 |
| P120  | -2.1081038E-01 | -1.3258276E-01 | -1.9500808E-01 | -1.1698593E-01 |
| P121  | -2.5726379E-03 | -2.6620948E-03 | -2.5612988E-03 | -2.6438558E-03 |
| P122  | -1.0661856E-01 | -2.4767944E-02 | -9.1275496E-02 | -9.9097857E-03 |
| P123  | -1.3147511E-01 | -1.0131434E-01 | -1.2485705E-01 | -9.4691300E-02 |
| P124  | -3.8616428E-02 | -4.6196362E-03 | -3.2315550E-02 | 1.4249340E-03  |
| P125  | 2.7715325E-02  | 2.1437750E-02  | 2.6335600E-02  | 2.0054567E-02  |
| P126  | 9.0873485E-03  | 1.7751885E-03  | 7.7227687E-03  | 4.5849720E-04  |

| (APC) | PHAFO          | PHAFP          | PHAAO          | PHAAP          |
|-------|----------------|----------------|----------------|----------------|
| P100  | 6.5000458E 00  | 5.9798325E 00  | 6.3207186E 00  | 5.8185456E 00  |
| P101  | 6.4583458E 00  | 5.9341179E 00  | 6.2796193E 00  | 5.7711940E 00  |
| P102  | 6.4197609E 00  | 5.8918185E 00  | 6.2415901E 00  | 5.7273799E 00  |
| P103  | 5.4376585E 00  | 4.9992630E 00  | 5.2868550E 00  | 4.8647860E 00  |
| P104  | 5.3914452E 00  | 4.9508481E 00  | 5.2414519E 00  | 4.8153928E 00  |
| P105  | 5.3557352E 00  | 4.9122317E 00  | 5.2062600E 00  | 4.7756251E 00  |
| P106  | 4.4221138E 00  | 4.0663519E 00  | 4.2989528E 00  | 3.9590285E 00  |
| P107  | 4.3642138E 00  | 4.0051821E 00  | 4.2420206E 00  | 3.8964171E 00  |
| P108  | 4.3136380E 00  | 3.9507716E 00  | 4.1921948E 00  | 3.8404497E 00  |
| P109  | 3.4560968E 00  | 3.1800145E 00  | 3.3594032E 00  | 3.0987071E 00  |
| P110  | 3.3951394E 00  | 3.1137687E 00  | 3.2993191E 00  | 3.0302189E 00  |
| P111  | 3.3364391E 00  | 3.0495927E 00  | 3.2414333E 00  | 2.9637519E 00  |
| P112  | 2.5642247E 00  | 2.3640308E 00  | 2.4922744E 00  | 2.3073680E 00  |
| P113  | 2.5685220E 00  | 2.3659312E 00  | 2.4963059E 00  | 2.3083197E 00  |
| P114  | 2.5319313E 00  | 2.3207512E 00  | 2.4598416E 00  | 2.2595707E 00  |
| P115  | 2.4416696E 00  | 2.2256723E 00  | 2.3711166E 00  | 2.1622570E 00  |
| P116  | 1.6805167E 00  | 1.5484612E 00  | 1.6328051E 00  | 1.5127724E 00  |
| P117  | 1.5552314E 00  | 1.4123112E 00  | 1.5093678E 00  | 1.3713871E 00  |
| P118  | 8.9012972E-01  | 8.2123774E-01  | 8.6459783E-01  | 8.0430559E-01  |
| P119  | 9.2499530E-01  | 8.5246162E-01  | 8.9837624E-01  | 8.3431158E-01  |
| P120  | 8.9120145E-01  | 8.1382357E-01  | 8.6494029E-01  | 7.9328684E-01  |
| P121  | 1.0960068E-03  | 1.1935286E-03  | 1.0794489E-03  | 1.2455520E-03  |
| P122  | 8.4681320E-01  | 7.6548569E-01  | 8.2122262E-01  | 7.4284200E-01  |
| P123  | 3.7976181E-01  | 3.4999636E-01  | 3.6876661E-01  | 3.4278055E-01  |
| P124  | 3.4438194E-01  | 3.1050659E-01  | 3.3383656E-01  | 3.0121599E-01  |
| P125  | -7.9370064E-02 | -7.3176796E-02 | -7.7078453E-02 | -7.1672049E-02 |
| P126  | -7.5043727E-02 | -6.7769717E-02 | -7.2764516E-02 | -6.5756227E-02 |



(APC)

NHAFO

NHAFB

NHAAO

NHAAP

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|      |                |                |                |                |
|------|----------------|----------------|----------------|----------------|
| P100 | -3.1158867E 00 | -2.9521373E 00 | -3.0306983E 00 | -2.8453709E 00 |
| P101 | -3.0733489E 00 | -2.9228119E 00 | -2.9888095E 00 | -2.8163269E 00 |
| P102 | -3.0339889E 00 | -2.8956772E 00 | -2.9500498E 00 | -2.7894528E 00 |
| P103 | -2.6018001E 00 | -2.4577147E 00 | -2.5302311E 00 | -2.3686456E 00 |
| P104 | -2.5641103E 00 | -2.4306571E 00 | -2.4931756E 00 | -2.3419604E 00 |
| P105 | -2.5317355E 00 | -2.4084616E 00 | -2.4612919E 00 | -2.3199728E 00 |
| P106 | -2.1220975E 00 | -1.9901063E 00 | -2.0635386E 00 | -1.9182254E 00 |
| P107 | -2.0757082E 00 | -1.9556075E 00 | -2.0179071E 00 | -1.8842100E 00 |
| P108 | -2.0327525E 00 | -1.9245833E 00 | -1.9756072E 00 | -1.8535389E 00 |
| P109 | -1.6673753E 00 | -1.5492873E 00 | -1.6212502E 00 | -1.4936617E 00 |
| P110 | -1.6153171E 00 | -1.5109580E 00 | -1.5699719E 00 | -1.4557624E 00 |
| P111 | -1.5641954E 00 | -1.4741375E 00 | -1.5196047E 00 | -1.4193067E 00 |
| P112 | -1.2511490E 00 | -1.1480443E 00 | -1.2165942E 00 | -1.1073627E 00 |
| P113 | -1.2485750E 00 | -1.1481033E 00 | -1.2139681E 00 | -1.1072241E 00 |
| P114 | -1.2062523E 00 | -1.1200906E 00 | -1.1721016E 00 | -1.0791615E 00 |
| P115 | -1.1373957E 00 | -1.0670929E 00 | -1.1043834E 00 | -1.0269740E 00 |
| P116 | -8.2000133E-01 | -7.4800891E-01 | -7.9708285E-01 | -7.2145219E-01 |
| P117 | -7.2004393E-01 | -6.7106231E-01 | -6.9863877E-01 | -6.4547922E-01 |
| P118 | -4.3808602E-01 | -3.9523693E-01 | -4.2575825E-01 | -3.8131820E-01 |
| P119 | -4.5294353E-01 | -4.1002024E-01 | -4.4012824E-01 | -3.9548150E-01 |
| P120 | -4.2379150E-01 | -3.8742616E-01 | -4.1135186E-01 | -3.7309023E-01 |
| P121 | -8.4049766E-04 | -6.7396215E-04 | -8.2762552E-04 | -6.6455153E-04 |
| P122 | -3.8975138E-01 | -3.6013070E-01 | -3.7783304E-01 | -3.4617591E-01 |
| P123 | -1.8635817E-01 | -1.6813074E-01 | -1.8105777E-01 | -1.6217203E-01 |
| P124 | -1.5784373E-01 | -1.4511602E-01 | -1.5294028E-01 | -1.3943974E-01 |
| P125 | 3.8996076E-02  | 3.5172236E-02  | 3.7890626E-02  | 3.3928537E-02  |
| P126 | 3.4478706E-02  | 3.1795998E-02  | 3.3417956E-02  | 3.0559469E-02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| (GIC)  | PLAFO          | PLAFP          | PLAAO          | PLAAP          |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | -6.9533250E 01 | -6.6678963E 01 | -6.7509639E 01 | -6.4573107E 01 |
| 2 Q2   | -1.1309867E 02 | -1.0916320E 02 | -1.0955122E 02 | -1.0544926E 02 |
| 3 Q3   | -2.3173697E 02 | -2.2620626E 02 | -2.2731077E 02 | -2.2159782E 02 |
| 4 Q4   | -3.5020553E 02 | -3.4217908E 02 | -3.4369030E 02 | -3.3543140E 02 |
| 5 Q5   | -4.8589562E 02 | -4.7316895E 02 | -4.7712311E 02 | -4.6420757E 02 |
| 6 Q6   | -4.8001484E 02 | -4.6756970E 02 | -4.7179118E 02 | -4.5922996E 02 |
| 7 Q7   | -5.7556347E 02 | -5.5333455E 02 | -5.6453440E 02 | -5.4309018E 02 |
| 8 Q8   | -5.6265335E 02 | -5.3958908E 02 | -5.5132828E 02 | -5.2908013E 02 |
| 9 Q9   | 1.1786544E-05  | 1.1412404E-05  | 1.1572152E-05  | 1.1203185E-05  |
| 10 Q10 | 3.7435528E 01  | 3.6421893E 01  | 3.6671081E 01  | 3.5625460E 01  |
| 11 Q11 | 1.1705947E 02  | 1.1355894E 02  | 1.1535299E 02  | 1.1183341E 02  |
| 12 Q12 | 1.8964196E 02  | 1.8454108E 02  | 1.8644592E 02  | 1.8126105E 02  |
| 13 Q13 | 2.7128212E 02  | 2.6440764E 02  | 2.6735176E 02  | 2.6039978E 02  |
| 14 Q14 | 2.6117339E 02  | 2.5512239E 02  | 2.5911445E 02  | 2.5247007E 02  |
| 15 Q15 | 3.8804610E 02  | 3.7758054E 02  | 3.8234600E 02  | 3.7171343E 02  |
| 16 Q16 | 8.2817479E 02  | 8.0026993E 02  | 8.0832741E 02  | 7.8026115E 02  |
| 17 Q17 | 9.0447166E 02  | 8.7320490E 02  | 8.8167808E 02  | 8.5071772E 02  |
| 18 Q18 | -8.2174895E-06 | -7.9701822E-06 | -8.0369591E-06 | -7.7870162E-06 |
| 19 Q25 | -1.4131793E 01 | -1.4051440E 01 | -1.4628436E 01 | -1.4586941E 01 |
| 20 Q30 | -2.2449342E 02 | -2.1850957E 02 | -2.2143617E 02 | -2.1548153E 02 |
| 21 Q31 | 1.8830242E 01  | 1.8509382E 01  | 1.9424351E 01  | 1.9177275E 01  |
| 22 Q32 | -2.5038365E 01 | -2.4196478E 01 | -2.3587548E 01 | -2.2641231E 01 |
| 23 Q33 | 1.4824559E 01  | 1.4876482E 01  | 1.4832985E 01  | 1.4892562E 01  |
| 24 Q34 | -5.3102905E 01 | -5.1562240E 01 | -5.2024586E 01 | -5.0444177E 01 |
| 25 Q35 | 3.2452832E 01  | 3.2058862E 01  | 3.2787279E 01  | 3.2433525E 01  |
| 26 Q36 | -6.9171979E 01 | -6.7183543E 01 | -6.7262094E 01 | -6.5199411E 01 |
| 27 Q37 | -6.3249269E 01 | -6.1777576E 01 | -6.2365406E 01 | -6.0875002E 01 |
| 28 Q38 | -4.2317805E 01 | -4.1443993E 01 | -4.2034339E 01 | -4.1195980E 01 |
| 29 P40 | -1.4702019E 03 | -1.4217723E 03 | -1.4541769E 03 | -1.4061184E 03 |
| 30 P41 | -3.3507921E 03 | -3.2373751E 03 | -3.2717189E 03 | -3.1554716E 03 |
| 31 P42 | -7.5961402E 03 | -7.3750402E 03 | -7.4296452E 03 | -7.2019863E 03 |
| 32 P43 | -1.4890667E 04 | -1.4489125E 04 | -1.4574142E 04 | -1.4160348E 04 |
| 33 P44 | -1.4883222E 04 | -1.4481881E 04 | -1.4566855E 04 | -1.4153268E 04 |
| 34 P45 | -2.4449049E 04 | -2.3797157E 04 | -2.3959977E 04 | -2.3292121E 04 |
| 35 P46 | -3.3899582E 04 | -3.3002670E 04 | -3.3248603E 04 | -3.2333441E 04 |
| 36 P47 | -4.4557505E 04 | -4.3239360E 04 | -4.3692489E 04 | -4.2380610E 04 |
| 37 P48 | -5.4956593E 04 | -5.3221758E 04 | -5.3892063E 04 | -5.2168592E 04 |
| 38 P49 | -5.4956594E 04 | -5.3221758E 04 | -5.3892063E 04 | -5.2168594E 04 |
| 39 P50 | 2.5918808E 02  | 2.5605105E 02  | 2.7776009E 02  | 2.7659256E 02  |
| 40 P51 | -1.4836730E 03 | -1.4332571E 03 | -1.4462759E 03 | -1.3942879E 03 |
| 41 P52 | -4.8536713E 03 | -4.7149823E 03 | -4.7631342E 03 | -4.6218052E 03 |
| 42 P53 | -1.0954921E 04 | -1.0667561E 04 | -1.0790983E 04 | -1.0500155E 04 |
| 43 P54 | -9.2250761E 03 | -8.9830911E 03 | -9.0870242E 03 | -8.8421199E 03 |
| 44 P55 | -1.7009170E 04 | -1.6556101E 04 | -1.6728084E 04 | -1.6268398E 04 |
| 45 P56 | -2.7402832E 04 | -2.6659048E 04 | -2.6915059E 04 | -2.6158200E 04 |
| 46 P57 | -2.6117640E 04 | -2.5408739E 04 | -2.5652743E 04 | -2.4931380E 04 |
| 47 P58 | -3.7295734E 04 | -3.6171306E 04 | -3.6510232E 04 | -3.5379804E 04 |
| 48 P59 | -4.9875332E 04 | -4.8283170E 04 | -4.8724706E 04 | -4.7131671E 04 |
| 49 P60 | -4.9875332E 04 | -4.8283170E 04 | -4.8724706E 04 | -4.7131671E 04 |
| 50 P62 | 6.2044635E 02  | 6.0417631E 02  | 6.1040438E 02  | 5.9388878E 02  |

| (GIC)  | PLAFO          | PLAFP          | PLAAO          | PLAAP          |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 6.2032200E 02  | 6.0405522E 02  | 6.1028206E 02  | 5.9376976E 02  |
| 52 P64 | 1.4699631E 02  | 1.4308571E 02  | 1.4434772E 02  | 1.4002738E 02  |
| 53 P67 | 6.7765780E 02  | 6.6708741E 02  | 6.7086546E 02  | 6.6010250E 02  |
| 54 P68 | 6.7752198E 02  | 6.6695369E 02  | 6.7073101E 02  | 6.5997021E 02  |
| 55 P69 | 2.6412112E 02  | 2.5829947E 02  | 2.5993988E 02  | 2.5399218E 02  |
| 56 P72 | -2.8625843E 02 | -2.7277775E 02 | -2.7797107E 02 | -2.6392519E 02 |
| 57 P73 | -2.8620107E 02 | -2.7272311E 02 | -2.7791539E 02 | -2.6387230E 02 |
| 58 P74 | 4.4701806E 02  | 4.3650421E 02  | 4.4000977E 02  | 4.2934144E 02  |
| 59 P77 | 5.4479386E 03  | 5.2964400E 03  | 5.3286573E 03  | 5.1737728E 03  |
| 60 P79 | 3.6361165E 03  | 3.5339276E 03  | 3.5621338E 03  | 3.4583339E 03  |
| 61 P80 | 3.6353879E 03  | 3.5332194E 03  | 3.5614201E 03  | 3.4576409E 03  |
| 62 P81 | -9.7285799E 01 | -9.4473457E 01 | -9.4402220E 01 | -9.1323633E 01 |
| 63 P82 | 5.5056274E 02  | 5.2938291E 02  | 5.3802732E 02  | 5.1668767E 02  |
| 64 P83 | -7.8195263E 02 | -7.1084588E 02 | -7.2952076E 02 | -6.6461872E 02 |
| 65 P84 | -1.1839893E 03 | -1.1033538E 03 | -1.1555132E 03 | -1.0821158E 03 |
| 66 P93 | -6.1379598E 02 | -5.9189432E 02 | -5.9570260E 02 | -5.7299877E 02 |
| 67 P94 | -1.3308371E 03 | -1.2879260E 03 | -1.2998943E 03 | -1.2558575E 03 |
| 68 P95 | -1.6322681E 03 | -1.5851498E 03 | -1.6005257E 03 | -1.5522993E 03 |
| 69 P96 | 5.5702682E 03  | 5.3419320E 03  | 5.4581501E 03  | 5.2378934E 03  |
| 70 P97 | 8.7733756E 03  | 8.4700881E 03  | 8.5522779E 03  | 8.2519623E 03  |
| 71 Q19 | 4.9560261E 01  | 4.8399851E 01  | 4.9664581E 01  | 4.8564342E 01  |
| 72 Q20 | 1.6123390E 01  | 1.6156083E 01  | 1.7213353E 01  | 1.7349920E 01  |
| 73 Q21 | 3.5529138E 01  | 3.4533818E 01  | 3.4703317E 01  | 3.3670336E 01  |
| 74 Q22 | -3.5320728E 00 | -3.3828923E 00 | -3.6579159E 00 | -3.5287701E 00 |
| 75 Q23 | 3.2009995E 01  | 3.1038093E 01  | 3.1299582E 01  | 3.0293636E 01  |
| 76 Q24 | 1.5590310E 01  | 1.4847584E 01  | 1.4923456E 01  | 1.4145722E 01  |
| 77 Q26 | 7.4786901E 01  | 7.2300463E 01  | 7.2561074E 01  | 6.9975415E 01  |
| 78 Q28 | 1.1512542E 02  | 1.1151706E 02  | 1.1081951E 02  | 1.0706550E 02  |

| (GIC) |     | NMAFO          | NMAFP          | NMAAO          | NMAAP          |
|-------|-----|----------------|----------------|----------------|----------------|
| 1     | Q1  | 5.5354509E 01  | 4.9645960E 01  | 5.4123647E 01  | 4.8250588E 01  |
| 2     | Q2  | 1.0837317E 02  | 1.0050227E 02  | 1.0621542E 02  | 9.8011523E 01  |
| 3     | Q3  | 6.6297393E 01  | 5.5236063E 01  | 6.3605168E 01  | 5.2179298E 01  |
| 4     | Q4  | 8.4222093E 01  | 6.8169384E 01  | 8.0259230E 01  | 6.3741537E 01  |
| 5     | Q5  | 6.8619766E 01  | 4.3166567E 01  | 6.3283871E 01  | 3.7452860E 01  |
| 6     | Q6  | 3.3807389E 01  | 8.9173223E 00  | 2.8805338E 01  | 3.6830878E 00  |
| 7     | Q7  | -1.0144031E 02 | -1.4589812E 02 | -1.0814870E 02 | -1.5103718E 02 |
| 8     | Q8  | -8.6254258E 01 | -1.3238281E 02 | -9.3142728E 01 | -1.3763911E 02 |
| 9     | Q9  | 3.1497664E-07  | 1.0632557E-06  | 4.4538073E-07  | 1.1833134E-06  |
| 10    | Q10 | -1.3261735E 01 | -1.1234482E 01 | -1.2796763E 01 | -1.0705524E 01 |
| 11    | Q11 | 5.3552671E 00  | 1.2356302E 01  | 6.3932321E 00  | 1.3432380E 01  |
| 12    | Q12 | -2.1049024E 01 | -1.0847314E 01 | -1.9105036E 01 | -8.7353107E 00 |
| 13    | Q13 | 5.6348777E 00  | 1.9383759E 01  | 8.0255141E 00  | 2.1929457E 01  |
| 14    | Q14 | 6.1173208E 01  | 7.4395185E 01  | 6.2766184E 01  | 7.6054928E 01  |
| 15    | Q15 | -1.0258995E 01 | 1.0672020E 01  | -6.7919154E 00 | 1.4473200E 01  |
| 16    | Q16 | -1.9663380E 02 | -1.3974440E 02 | -1.8423321E 02 | -1.2810077E 02 |
| 17    | Q17 | -2.6166019E 02 | -1.9912704E 02 | -2.4779603E 02 | -1.8587545E 02 |
| 18    | Q18 | 2.4979185E-06  | 2.0033070E-06  | 2.3881111E-06  | 1.8882264E-06  |
| 19    | Q25 | -4.0469638E 01 | -4.0630350E 01 | -4.0167558E 01 | -4.0250545E 01 |
| 20    | Q30 | -3.4239085E 01 | -4.6206776E 01 | -3.6098658E 01 | -4.8007943E 01 |
| 21    | Q31 | 5.4633370E 01  | 5.5275123E 01  | 5.4272012E 01  | 5.4766175E 01  |
| 22    | Q32 | 6.7026773E 01  | 6.5343039E 01  | 6.6144320E 01  | 6.4251698E 01  |
| 23    | Q33 | 1.2771205E 01  | 1.2667346E 01  | 1.2766077E 01  | 1.2646919E 01  |
| 24    | Q34 | 1.7647016E 01  | 1.4565698E 01  | 1.6991130E 01  | 1.3830316E 01  |
| 25    | Q35 | 4.6725795E 01  | 4.7513122E 01  | 4.6522370E 01  | 4.7229856E 01  |
| 26    | Q36 | 4.9962404E 01  | 4.5985572E 01  | 4.8800723E 01  | 4.4675369E 01  |
| 27    | Q37 | -3.5664102E 00 | -6.5097569E 00 | -4.1040142E 00 | -7.0848043E 00 |
| 28    | Q38 | -2.6195076E 01 | -2.7942698E 01 | -2.6367500E 01 | -2.8044213E 01 |
| 29    | P40 | -4.3132241E 02 | -5.2818161E 02 | -4.4106972E 02 | -5.3718644E 02 |
| 30    | P41 | 1.6378985E 03  | 1.4110653E 03  | 1.5898021E 03  | 1.3573079E 03  |
| 31    | P42 | 3.2110015E 03  | 2.7688043E 03  | 3.1097313E 03  | 2.6544137E 03  |
| 32    | P43 | 5.7707102E 03  | 4.9676325E 03  | 5.5781842E 03  | 4.7505988E 03  |
| 33    | P44 | 5.7678249E 03  | 4.9651487E 03  | 5.5753952E 03  | 4.7482234E 03  |
| 34    | P45 | 7.1187421E 03  | 5.8149688E 03  | 6.8212648E 03  | 5.4855580E 03  |
| 35    | P46 | 7.7843421E 03  | 5.9905331E 03  | 7.3883841E 03  | 5.5580704E 03  |
| 36    | P47 | 5.9076972E 03  | 3.2914186E 03  | 5.3876339E 03  | 2.7638832E 03  |
| 37    | P48 | 4.3119926E 03  | 8.4233598E 02  | 3.6644927E 03  | 2.1755924E 02  |
| 38    | P49 | 4.3119931E 03  | 8.4233608E 02  | 3.6644931E 03  | 2.1755947E 02  |
| 39    | P50 | 1.4040186E 03  | 1.4102944E 03  | 1.3927226E 03  | 1.3950578E 03  |
| 40    | P51 | 8.9521706E 02  | 7.9438598E 02  | 8.7247034E 02  | 7.6849431E 02  |
| 41    | P52 | 1.0146637E 03  | 7.3728741E 02  | 9.5959456E 02  | 6.7693713E 02  |
| 42    | P53 | 2.9094589E 01  | -5.4562502E 02 | -7.0621336E 01 | -6.5227525E 02 |
| 43    | P54 | 2.4500503E 01  | -4.5946754E 02 | -5.9469669E 01 | -5.4927710E 02 |
| 44    | P55 | 1.5372389E 03  | 6.3110745E 02  | 1.3662685E 03  | 4.4690026E 02  |
| 45    | P56 | 4.5255837E 03  | 3.0380259E 03  | 4.2288963E 03  | 2.7151819E 03  |
| 46    | P57 | 4.3133338E 03  | 2.8955425E 03  | 4.0305611E 03  | 2.5878399E 03  |
| 47    | P58 | 8.5844824E 03  | 6.3356394E 03  | 8.1067005E 03  | 5.8458512E 03  |
| 48    | P59 | 1.4058619E 04  | 1.0874315E 04  | 1.3358752E 04  | 1.0172694E 04  |
| 49    | P60 | 1.4058619E 04  | 1.0874315E 04  | 1.3358752E 04  | 1.0172694E 04  |
| 50    | P62 | -4.6023187E 01 | -1.3483180E 01 | -3.9915155E 01 | -6.8639234E 00 |

| (GIC)  | NMAFO          | NMAFP          | NMAAO          | NMAAP          |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | -4.6013966E 01 | -1.3480482E 01 | -3.9907160E 01 | -6.8825453E 02 |
| 52 P64 | -4.6384399E 01 | -3.8563221E 01 | -4.4590915E 01 | -3.6550241E 01 |
| 53 P67 | 1.4483900E 02  | 1.6597953E 02  | 1.4897037E 02  | 1.7049625E 02  |
| 54 P68 | 1.4480999E 02  | 1.6594629E 02  | 1.4894053E 02  | 1.7046210E 02  |
| 55 P69 | -2.0170499E 01 | -8.5272772E 00 | -1.7627279E 01 | -5.7318705E 00 |
| 56 P72 | 2.7534314E 02  | 2.4838159E 02  | 2.7030231E 02  | 2.4221031E 02  |
| 57 P73 | 2.7528796E 02  | 2.4833181E 02  | 2.7024816E 02  | 2.4216176E 02  |
| 58 P74 | -1.8707184E 01 | 2.3202812E 00  | -1.4444411E 01 | 6.8920832E 00  |
| 59 P77 | -1.9884728E 03 | -1.6854783E 03 | -1.9159201E 03 | -1.6061522E 03 |
| 60 P79 | -9.4868574E 02 | -7.4430909E 02 | -9.0368576E 02 | -6.9608627E 02 |
| 61 P80 | -9.4849563E 02 | -7.4415994E 02 | -9.0350466E 02 | -6.9594678E 02 |
| 62 P81 | 1.1236852E 02  | 1.0674402E 02  | 1.1061464E 02  | 1.0445754E 02  |
| 63 P82 | -1.5461469E 02 | -1.1225477E 02 | -1.4698988E 02 | -1.0431035E 02 |
| 64 P83 | 4.2860673E 02  | 2.8639424E 02  | 3.9671515E 02  | 2.6691136E 02  |
| 65 P84 | -1.1004162E 03 | -1.2616867E 03 | -1.1177367E 03 | -1.2645315E 03 |
| 66 P93 | 5.1521226E 02  | 4.7140929E 02  | 5.0420698E 02  | 4.5879940E 02  |
| 67 P94 | 6.3017864E 02  | 5.4435698E 02  | 6.1135771E 02  | 5.2328420E 02  |
| 68 P95 | 4.4867007E 02  | 3.5443409E 02  | 4.2936276E 02  | 3.3291030E 02  |
| 69 P96 | 8.5391716E 02  | 1.3105898E 03  | 9.2211301E 02  | 1.3626272E 03  |
| 70 P97 | -2.5381040E 03 | -1.9315324E 03 | -2.4036216E 03 | -1.8029920E 03 |
| 71 Q19 | 5.2417662E 01  | 5.4738497E 01  | 5.2354212E 01  | 5.4554694E 01  |
| 72 Q20 | 8.0484133E 01  | 8.0418775E 01  | 7.9821164E 01  | 7.9548042E 01  |
| 73 Q21 | -1.8446251E 01 | -1.6455634E 01 | -1.7943949E 01 | -1.5877997E 01 |
| 74 Q22 | -1.2183394E 01 | -1.2481768E 01 | -1.2106854E 01 | -1.2365151E 01 |
| 75 Q23 | -1.5461896E 01 | -1.3518105E 01 | -1.5029789E 01 | -1.3017903E 01 |
| 76 Q24 | -2.5349117E 01 | -2.3863674E 01 | -2.4943504E 01 | -2.3388040E 01 |
| 77 Q26 | -6.4911183E 01 | -5.9938338E 01 | -6.3557328E 01 | -5.8386014E 01 |
| 78 Q28 | -1.3441089E 02 | -1.2719426E 02 | -1.3179183E 02 | -1.2428384E 02 |

| (GIC)  | PHAF0          | PHAFP          | PHAA0          | PHAAP          |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | -7.5441059E 01 | -7.0408999E 01 | -7.3651152E 01 | -6.8441115E 01 |
| 2 Q2   | -1.4490347E 02 | -1.3770256E 02 | -1.4153172E 02 | -1.3505538E 02 |
| 3 Q3   | -1.7841766E 02 | -1.6807885E 02 | -1.7416444E 02 | -1.6406363E 02 |
| 4 Q4   | -2.6414320E 02 | -2.4874128E 02 | -2.5772039E 02 | -2.4299817E 02 |
| 5 Q5   | -3.3044645E 02 | -3.0572222E 02 | -3.2178149E 02 | -2.9764733E 02 |
| 6 Q6   | -3.1063592E 02 | -2.8574625E 02 | -3.0223685E 02 | -2.7806038E 02 |
| 7 Q7   | -2.8215517E 02 | -2.3613791E 02 | -2.7026913E 02 | -2.2665898E 02 |
| 8 Q8   | -2.9470977E 02 | -2.4661193E 02 | -2.8236563E 02 | -2.3670852E 02 |
| 9 Q9   | 6.7786448E-06  | 6.0244291E-06  | 6.5571264E-06  | 5.8329807E-06  |
| 10 Q10 | 1.8905513E 01  | 1.7666291E 01  | 1.8425610E 01  | 1.7148434E 01  |
| 11 Q11 | 4.9516125E 01  | 4.3363411E 01  | 4.8113718E 01  | 4.0885278E 01  |
| 12 Q12 | 1.1529462E 02  | 1.0586243E 02  | 1.1232566E 02  | 1.0217927E 02  |
| 13 Q13 | 1.4422887E 02  | 1.3107907E 02  | 1.4045142E 02  | 1.2586446E 02  |
| 14 Q14 | 1.0229027E 02  | 8.9111263E 01  | 9.9645219E 01  | 8.2878014E 01  |
| 15 Q15 | 2.3481750E 02  | 2.1398796E 02  | 2.2903239E 02  | 2.0432425E 02  |
| 16 Q16 | 6.4028013E 02  | 5.8403321E 02  | 6.1966414E 02  | 5.7504216E 02  |
| 17 Q17 | 7.5258765E 02  | 6.8989260E 02  | 7.2916259E 02  | 6.7790663E 02  |
| 18 Q18 | -6.7246549E-06 | -6.2402147E-06 | -6.5435210E-06 | -6.1060811E-06 |
| 19 Q25 | 2.3140197E 01  | 2.3403809E 01  | 2.2651296E 01  | 2.3352435E 01  |
| 20 Q30 | -9.4011172E 01 | -8.2600174E 01 | -9.1123691E 01 | -7.7618235E 01 |
| 21 Q31 | -2.2145759E 01 | -2.3453411E 01 | -2.1775714E 01 | -2.3893851E 01 |
| 22 Q32 | -5.3541301E 01 | -5.2784891E 01 | -5.2394071E 01 | -5.2435744E 01 |
| 23 Q33 | -8.1924421E-01 | -7.7738333E-01 | -8.3340104E-01 | -5.7467409E-01 |
| 24 Q34 | -4.2444021E 01 | -3.9551537E 01 | -4.1409679E 01 | -3.8271942E 01 |
| 25 Q35 | -1.9091830E 01 | -1.9905590E 01 | -1.8743549E 01 | -2.0130974E 01 |
| 26 Q36 | -7.7755268E 01 | -7.4014335E 01 | -7.5877286E 01 | -7.2542758E 01 |
| 27 Q37 | -3.1489812E 01 | -2.8715371E 01 | -3.0664336E 01 | -2.7843496E 01 |
| 28 Q38 | -6.5319067E 00 | -4.6040083E 00 | -6.1843151E 00 | -4.1564616E 00 |
| 29 P40 | -3.8747414E 02 | -2.9783722E 02 | -3.7438826E 02 | -2.6145745E 02 |
| 30 P41 | -2.8596790E 03 | -2.6599013E 03 | -2.7895411E 03 | -2.5819673E 03 |
| 31 P42 | -6.3043098E 03 | -5.9091232E 03 | -6.1522418E 03 | -5.7526517E 03 |
| 32 P43 | -1.2321484E 04 | -1.1587469E 04 | -1.2024048E 04 | -1.1300777E 04 |
| 33 P44 | -1.2315323E 04 | -1.1581676E 04 | -1.2018036E 04 | -1.1295127E 04 |
| 34 P45 | -1.8820822E 04 | -1.7600428E 04 | -1.8352947E 04 | -1.7154910E 04 |
| 35 P46 | -2.4936622E 04 | -2.3226201E 04 | -2.4303387E 04 | -2.2629363E 04 |
| 36 P47 | -3.0156494E 04 | -2.7594753E 04 | -2.9303367E 04 | -2.6822555E 04 |
| 37 P48 | -3.5608627E 04 | -3.2157073E 04 | -3.4527130E 04 | -3.1201662E 04 |
| 38 P49 | -3.5608628E 04 | -3.2157074E 04 | -3.4527131E 04 | -3.1201663E 04 |
| 39 P50 | -7.8489942E 02 | -8.0384297E 02 | -7.7046434E 02 | -8.1161100E 02 |
| 40 P51 | -1.3126690E 03 | -1.2291957E 03 | -1.2812850E 03 | -1.1967044E 03 |
| 41 P52 | -3.2473641E 03 | -2.9957448E 03 | -3.1650798E 03 | -2.9016587E 03 |
| 42 P53 | -5.8358589E 03 | -5.2975027E 03 | -5.6832754E 03 | -5.0930431E 03 |
| 43 P54 | -4.9143430E 03 | -4.4609966E 03 | -4.7858535E 03 | -4.2888221E 03 |
| 44 P55 | -1.0515856E 04 | -9.6530062E 03 | -1.0245614E 04 | -9.3088162E 03 |
| 45 P56 | -1.8855190E 04 | -1.7424785E 04 | -1.8378327E 04 | -1.6837709E 04 |
| 46 P57 | -1.7970882E 04 | -1.6607562E 04 | -1.7516384E 04 | -1.6048020E 04 |
| 47 P58 | -2.8076857E 04 | -2.5884072E 04 | -2.7294382E 04 | -2.5250363E 04 |
| 48 P59 | -4.0260522E 04 | -3.7118983E 04 | -3.9098102E 04 | -3.6355698E 04 |
| 49 P60 | -4.0260522E 04 | -3.7118983E 04 | -3.9098102E 04 | -3.6355698E 04 |
| 50 P62 | 3.7739853E 02  | 3.4630343E 02  | 3.6769779E 02  | 3.3438521E 02  |

| (GIC)  | PHAF0          | PHAFP          | PHAA0          | PHAAP          |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 3.7732291E 02  | 3.4623404E 02  | 3.6762412E 02  | 3.3431821E 02  |
| 52 P64 | 1.0808655E 02  | 1.0120439E 02  | 1.0542535E 02  | 9.8566837E 01  |
| 53 P67 | 2.9044427E 02  | 2.6848729E 02  | 2.8313494E 02  | 2.5968873E 02  |
| 54 P68 | 2.9038606E 02  | 2.6843348E 02  | 2.8307818E 02  | 2.5963667E 02  |
| 55 P69 | 1.6271641E 02  | 1.5157422E 02  | 1.5862074E 02  | 1.4734863E 02  |
| 56 P72 | -2.9920788E 02 | -2.7790698E 02 | -2.9301965E 02 | -2.6803916E 02 |
| 57 P73 | -2.9914791E 02 | -2.7785131E 02 | -2.9296094E 02 | -2.6798546E 02 |
| 58 P74 | 2.6158390E 02  | 2.4148916E 02  | 2.5477686E 02  | 2.3399509E 02  |
| 59 P77 | 4.4863921E 03  | 4.2042024E 03  | 4.3722894E 03  | 4.1033952E 03  |
| 60 P79 | 2.7157521E 03  | 2.5232935E 03  | 2.6446772E 03  | 2.4545479E 03  |
| 61 P80 | 2.7152079E 03  | 2.5227879E 03  | 2.6441472E 03  | 2.4540560E 03  |
| 62 P81 | -1.2039263E 02 | -1.1647968E 02 | -1.1810965E 02 | -1.1446645E 02 |
| 63 P82 | 4.1900600E 02  | 3.7866582E 02  | 4.0705383E 02  | 3.6734138E 02  |
| 64 P83 | -7.3355542E 02 | -5.9672406E 02 | -6.8222248E 02 | -5.5730620E 02 |
| 65 P84 | 3.4261608E 01  | 2.0579226E 02  | 6.7384998E 01  | 2.2531744E 02  |
| 66 P93 | -6.4348779E 02 | -6.0796641E 02 | -6.2821240E 02 | -5.9457372E 02 |
| 67 P94 | -1.1151785E 03 | -1.0402706E 03 | -1.0878367E 03 | -1.0118073E 03 |
| 68 P95 | -1.1617710E 03 | -1.0772850E 03 | -1.1331769E 03 | -1.0443825E 03 |
| 69 P96 | 2.9176287E 03  | 2.4414581E 03  | 2.7954198E 03  | 2.3434145E 03  |
| 70 P97 | 7.3001007E 03  | 6.6919586E 03  | 7.0728775E 03  | 6.5756947E 03  |
| 71 Q19 | -1.7811752E 01 | -1.9937145E 01 | -1.7616388E 01 | -2.0818389E 01 |
| 72 Q20 | -5.2866102E 01 | -5.3056449E 01 | -5.1838602E 01 | -5.3208118E 01 |
| 73 Q21 | 2.4827291E 01  | 2.3465592E 01  | 2.4217747E 01  | 2.2870771E 01  |
| 74 Q22 | -8.6832465E-01 | -8.4416361E-02 | -8.2053941E-01 | 1.4174040E-01  |
| 75 Q23 | 2.4799089E 01  | 2.3231955E 01  | 2.4210989E 01  | 2.2429881E 01  |
| 76 Q24 | 2.2261088E 01  | 2.1215691E 01  | 2.1741200E 01  | 2.0655431E 01  |
| 77 Q26 | 8.6428305E 01  | 8.2089496E 01  | 8.4381723E 01  | 8.0245743E 01  |
| 78 Q28 | 1.6890117E 02  | 1.6225452E 02  | 1.6468345E 02  | 1.6015980E 02  |

| (GIC) |     | NHAFO          |  | NHAFP          |  | NHAAO          |  | NHAAP          |
|-------|-----|----------------|--|----------------|--|----------------|--|----------------|
| 1     | Q1  | 3.0978954E 01  |  | 2.6496491E 01  |  | 3.0217385E 01  |  | 2.5628225E 01  |
| 2     | Q2  | 7.2806713E 01  |  | 8.4438468E 01  |  | 7.1157744E 01  |  | 8.1476113E 01  |
| 3     | Q3  | 9.0052470E 01  |  | 9.4080025E 01  |  | 8.7965895E 01  |  | 9.0865192E 01  |
| 4     | Q4  | 1.3200759E 02  |  | 1.2568352E 02  |  | 1.2887864E 02  |  | 1.2158204E 02  |
| 5     | Q5  | 1.4652622E 02  |  | 1.4210897E 02  |  | 1.4261054E 02  |  | 1.3692438E 02  |
| 6     | Q6  | 1.3908860E 02  |  | 1.3425981E 02  |  | 1.3526204E 02  |  | 1.2926728E 02  |
| 7     | Q7  | 1.1826710E 02  |  | 9.2931366E 01  |  | 1.1284926E 02  |  | 8.8091967E 01  |
| 8     | Q8  | 1.2031318E 02  |  | 9.3318839E 01  |  | 1.1474151E 02  |  | 8.8393821E 01  |
| 9     | Q9  | -3.0434080E-06 |  | -2.8793383E-06 |  | -2.9411362E-06 |  | -2.7584608E-06 |
| 10    | Q10 | -1.4330083E 01 |  | -1.2487729E 01 |  | -1.4016124E 01 |  | -1.2111813E 01 |
| 11    | Q11 | -2.0919784E 01 |  | -2.6358794E 01 |  | -2.0299382E 01 |  | -2.5168434E 01 |
| 12    | Q12 | -5.6914681E 01 |  | -5.6558405E 01 |  | -5.5479854E 01 |  | -5.4497417E 01 |
| 13    | Q13 | -6.5644624E 01 |  | -6.6442022E 01 |  | -6.3910007E 01 |  | -6.3894235E 01 |
| 14    | Q14 | -4.0403920E 01 |  | -4.2456215E 01 |  | -3.9291299E 01 |  | -4.0591146E 01 |
| 15    | Q15 | -1.0789927E 02 |  | -1.0213596E 02 |  | -1.0523619E 02 |  | -9.8416407E 01 |
| 16    | Q16 | -3.0225290E 02 |  | -2.6866328E 02 |  | -2.9249988E 02 |  | -2.5851525E 02 |
| 17    | Q17 | -3.6674688E 02 |  | -3.2582929E 02 |  | -3.5548798E 02 |  | -3.1391765E 02 |
| 18    | Q18 | 3.3684222E-06  |  | 3.0435537E-06  |  | 3.2800509E-06  |  | 2.9401267E-06  |
| 19    | Q25 | -2.0680526E 01 |  | -1.1934069E 01 |  | -2.0292672E 01 |  | -1.1825806E 01 |
| 20    | Q30 | 3.5542365E 01  |  | 3.9696667E 01  |  | 3.4323452E 01  |  | 3.7860026E 01  |
| 21    | Q31 | 2.3027661E 01  |  | 1.3265203E 01  |  | 2.2651021E 01  |  | 1.3195735E 01  |
| 22    | Q32 | 4.0035992E 01  |  | 2.6530110E 01  |  | 3.9259090E 01  |  | 2.6072722E 01  |
| 23    | Q33 | 1.2933826E 00  |  | 7.6532565E-01  |  | 1.2857732E 00  |  | 7.5992824E-01  |
| 24    | Q34 | 2.2879288E 01  |  | 1.9844624E 01  |  | 2.2348011E 01  |  | 1.9218816E 01  |
| 25    | Q35 | 1.6414513E 01  |  | 1.1695888E 01  |  | 1.6131996E 01  |  | 1.1535643E 01  |
| 26    | Q36 | 4.4710408E 01  |  | 3.8533808E 01  |  | 4.3699442E 01  |  | 3.7422100E 01  |
| 27    | Q37 | 9.7307326E 00  |  | 1.5541029E 01  |  | 9.4272163E 00  |  | 1.4826140E 01  |
| 28    | Q38 | -3.5082439E 00 |  | -3.0057462E-01 |  | -3.5664024E 00 |  | -4.8494466E-01 |
| 29    | P40 | -1.0907057E 01 |  | 2.8258636E 01  |  | -1.3923758E 01 |  | 2.1872903E 01  |
| 30    | P41 | 1.3632606E 03  |  | 1.4735810E 03  |  | 1.3301738E 03  |  | 1.4200214E 03  |
| 31    | P42 | 3.1902694E 03  |  | 3.2803696E 03  |  | 3.1155366E 03  |  | 3.1674421E 03  |
| 32    | P43 | 6.3267097E 03  |  | 6.2038285E 03  |  | 6.1790359E 03  |  | 5.9979898E 03  |
| 33    | P44 | 6.3235463E 03  |  | 6.2007265E 03  |  | 6.1759463E 03  |  | 5.9949909E 03  |
| 34    | P45 | 9.2082081E 03  |  | 8.9984258E 03  |  | 8.9835198E 03  |  | 8.6906214E 03  |
| 35    | P46 | 1.1946584E 04  |  | 1.1641733E 04  |  | 1.1646559E 04  |  | 1.1235636E 04  |
| 36    | P47 | 1.4134526E 04  |  | 1.3360964E 04  |  | 1.3734271E 04  |  | 1.2865337E 04  |
| 37    | P48 | 1.6360320E 04  |  | 1.5087362E 04  |  | 1.5856989E 04  |  | 1.4500623E 04  |
| 38    | P49 | 1.6360320E 04  |  | 1.5087362E 04  |  | 1.5856989E 04  |  | 1.4500623E 04  |
| 39    | P50 | 5.9269977E 02  |  | 4.4817538E 02  |  | 5.8237690E 02  |  | 4.4037485E 02  |
| 40    | P51 | 6.4177079E 02  |  | 7.0265784E 02  |  | 6.2671569E 02  |  | 6.7758169E 02  |
| 41    | P52 | 1.4984159E 03  |  | 1.6375008E 03  |  | 1.4603735E 03  |  | 1.5757154E 03  |
| 42    | P53 | 2.4596068E 03  |  | 2.8027091E 03  |  | 2.3927748E 03  |  | 2.6887744E 03  |
| 43    | P54 | 2.0712207E 03  |  | 2.3601453E 03  |  | 2.0149420E 03  |  | 2.2642014E 03  |
| 44    | P55 | 4.9126425E 03  |  | 4.9240283E 03  |  | 4.7866164E 03  |  | 4.7426997E 03  |
| 45    | P56 | 9.1484205E 03  |  | 8.7208112E 03  |  | 8.9206165E 03  |  | 8.4157864E 03  |
| 46    | P57 | 8.7193595E 03  |  | 8.3118058E 03  |  | 8.5022399E 03  |  | 8.0210861E 03  |
| 47    | P58 | 1.3653505E 04  |  | 1.2547688E 04  |  | 1.3278504E 04  |  | 1.2103209E 04  |
| 48    | P59 | 1.9780788E 04  |  | 1.7841142E 04  |  | 1.9220047E 04  |  | 1.7210275E 04  |
| 49    | P60 | 1.9780788E 04  |  | 1.7841142E 04  |  | 1.9220047E 04  |  | 1.7210275E 04  |
| 50    | P62 | -1.7885948E 02 |  | -1.9490948E 02 |  | -1.7429364E 02 |  | -1.8749851E 02 |



| (GIC)  | NHAFO          | NHAFP          | NHAAO          | NHAAP          |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | -1.7882363E 02 | -1.9487042E 02 | -1.7425871E 02 | -1.8746094E 02 |
| 52 P64 | -5.9448642E 01 | -4.5984151E 01 | -5.8063009E 01 | -4.4665184E 01 |
| 53 P67 | -1.5190829E 02 | -1.1631940E 02 | -1.4823643E 02 | -1.1277471E 02 |
| 54 P68 | -1.5187784E 02 | -1.1629608E 02 | -1.4820672E 02 | -1.1275211E 02 |
| 55 P69 | -8.4458063E 01 | -7.4617490E 01 | -8.2411219E 01 | -7.2192824E 01 |
| 56 P72 | 1.2836506E 02  | 2.0848713E 02  | 1.2569807E 02  | 1.9988711E 02  |
| 57 P73 | 1.2833934E 02  | 2.0844536E 02  | 1.2567288E 02  | 1.9984707E 02  |
| 58 P74 | -1.2684762E 02 | -1.1994915E 02 | -1.2359515E 02 | -1.1572051E 02 |
| 59 P77 | -2.2730033E 03 | -2.1625098E 03 | -2.2169086E 03 | -2.0901112E 03 |
| 60 P79 | -1.3364062E 03 | -1.2738646E 03 | -1.3021218E 03 | -1.2296585E 03 |
| 61 P80 | -1.3361384E 03 | -1.2736094E 03 | -1.3018609E 03 | -1.2294120E 03 |
| 62 P81 | 6.4559841E 01  | 7.6861822E 01  | 6.3375675E 01  | 7.4307242E 01  |
| 63 P82 | -1.6584121E 02 | -1.4896882E 02 | -1.6073339E 02 | -1.4279258E 02 |
| 64 P83 | 2.3468935E 02  | 1.1055763E 02  | 2.1184236E 02  | 1.0065818E 02  |
| 65 P84 | -1.0236280E 02 | -2.6569878E 02 | -1.1710514E 02 | -2.6617878E 02 |
| 66 P93 | 3.3442987E 02  | 3.0054517E 02  | 3.2677745E 02  | 2.9123396E 02  |
| 67 P94 | 5.4313763E 02  | 5.7012620E 02  | 5.3005052E 02  | 5.4987178E 02  |
| 68 P95 | 5.5156134E 02  | 6.0042440E 02  | 5.3810818E 02  | 5.7833308E 02  |
| 69 P96 | -1.1911004E 03 | -9.2385653E 02 | -1.1359410E 03 | -8.7509886E 02 |
| 70 P97 | -3.5574448E 03 | -3.1605444E 03 | -3.4482336E 03 | -3.0450015E 03 |
| 71 Q19 | 1.3396165E 01  | 8.4777268E 00  | 1.3227224E 01  | 8.4887372E 00  |
| 72 Q20 | 3.1614416E 01  | 2.4850090E 01  | 3.1028605E 01  | 2.4353867E 01  |
| 73 Q21 | -1.8624263E 01 | -1.4454212E 01 | -1.8225234E 01 | -1.4071998E 01 |
| 74 Q22 | -7.2547915E 00 | 2.3136382E-01  | -7.1518208E 00 | 1.7441672E-02  |
| 75 Q23 | -1.6845032E 01 | -1.2831044E 01 | -1.6485439E 01 | -1.2487135E 01 |
| 76 Q24 | -1.6386175E 01 | -1.1180628E 01 | -1.6046520E 01 | -1.0936781E 01 |
| 77 Q26 | -5.0727130E 01 | -4.4642513E 01 | -4.9606409E 01 | -4.3330815E 01 |
| 78 Q28 | -9.7160571E 01 | -8.1671536E 01 | -9.4896452E 01 | -7.9402782E 01 |

STRESS CONVERSION FACTORS  
CONFIGURATION 5-C

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|    |     |               |    |
|----|-----|---------------|----|
| 1  | Q1  | 3.1421200E    | 01 |
| 2  | Q2  | 2.4698700E    | 01 |
| 3  | Q3  | 2.0229600E    | 01 |
| 4  | Q4  | 1.7145900E    | 01 |
| 5  | Q5  | 1.2848800E    | 01 |
| 6  | Q6  | 1.1431200E    | 01 |
| 7  | Q7  | 1.0145800E    | 01 |
| 8  | Q8  | 8.4112999E    | 00 |
| 9  | Q9  | 1.1682400E    | 01 |
| 10 | Q10 | 3.1229700E    | 01 |
| 11 | Q11 | 2.3845900E    | 01 |
| 12 | Q12 | 1.8779300E    | 01 |
| 13 | Q13 | 1.6277600E    | 01 |
| 14 | Q14 | 1.0551900E    | 01 |
| 15 | Q15 | 9.5908999E    | 00 |
| 16 | Q16 | 9.0168999E    | 00 |
| 17 | Q17 | 6.4337000E    | 00 |
| 18 | Q18 | 1.0162800E    | 00 |
| 19 | Q25 | 1.6666667E    | 01 |
| 20 | Q30 | 1.6666667E    | 01 |
| 21 | Q31 | 3.1250000E    | 01 |
| 22 | Q32 | 3.1250000E    | 01 |
| 23 | Q33 | 3.1250000E    | 01 |
| 24 | Q34 | 3.1250000E    | 01 |
| 25 | Q35 | 1.6666667E    | 01 |
| 26 | Q36 | 1.6666667E    | 01 |
| 27 | Q37 | 1.1111111E    | 01 |
| 28 | Q38 | 1.1111111E    | 01 |
| 29 | P40 | 5.9768300E    | 00 |
| 30 | P41 | 3.2865300E    | 00 |
| 31 | P42 | 2.0087700E    | 00 |
| 32 | P43 | 1.5132600E    | 00 |
| 33 | P44 | 1.5376000E    | 00 |
| 34 | P45 | 1.0380400E    | 00 |
| 35 | P46 | 7.9575999E-01 |    |
| 36 | P47 | 6.1194000E-01 |    |
| 37 | P48 | 6.1353000E-01 |    |
| 38 | P49 | 5.5434999E-01 |    |
| 39 | P50 | 5.9016300E    | 00 |
| 40 | P51 | 3.4613800E    | 00 |
| 41 | P52 | 2.4612500E    | 00 |
| 42 | P53 | 2.1096300E    | 00 |
| 43 | P54 | 2.3604300E    | 00 |
| 44 | P55 | 1.3299200E    | 00 |
| 45 | P56 | 1.0258900E    | 00 |
| 46 | P57 | 1.0258900E    | 00 |
| 47 | P58 | 7.2849999E-01 |    |
| 48 | P59 | 5.6503000E-01 |    |
| 49 | P60 | 5.5883999E-01 |    |
| 50 | P62 | 2.0323200E    | 00 |
| 51 | P63 | 2.0323200E    | 00 |
| 52 | P64 | 1.0000000E    | 00 |
| 53 | P67 | 1.3930600E    | 00 |
| 54 | P68 | 1.3930600E    | 00 |
| 55 | P69 | 1.0000000E    | 00 |
| 56 | P72 | 9.4958999E-01 |    |
| 57 | P73 | 9.4958999E-01 |    |

$$A = \frac{1}{.6135} = 1.63$$

58 P74 1.0000000E 00  
59 P77 8.8419000E-01  
60 P79 1.2185900E 00  
61 P80 1.2185900E 00  
62 P81 1.0000000E 00  
63 P82 1.0000000E 00  
64 P83 1.0000000E 00  
65 P84 1.0000000E 00  
66 P93 1.0424300E 01  
67 P94 1.0115300E 01  
68 P95 9.8309000E 00  
69 P96 1.0000000E 00  
70 P97 1.0000000E 00  
71 Q19 3.3333333E 01  
72 Q20 3.3333333E 01  
73 Q21 2.5000000E 01  
74 Q22 2.5000000E 01  
75 Q23 2.0000000E 01  
76 Q24 2.0000000E 01  
77 Q26 1.6666670E 01  
78 Q28 1.6666667E 01

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| (SIC)  | PLAFO          | PLAFP          | PLAAO          | PLAAP          |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | -2.1848181E 03 | -2.0951330E 03 | -2.1212339E 03 | -2.0289645E 03 |
| 2 Q2   | -2.7933901E 03 | -2.6961891E 03 | -2.7057726E 03 | -2.6044596E 03 |
| 3 Q3   | -4.6879461E 03 | -4.5760621E 03 | -4.5984059E 03 | -4.4828353E 03 |
| 4 Q4   | -6.0045890E 03 | -5.8669682E 03 | -5.8928795E 03 | -5.7512733E 03 |
| 5 Q5   | -6.2431756E 03 | -6.0796531E 03 | -6.1304594E 03 | -5.9645102E 03 |
| 6 Q6   | -5.4871455E 03 | -5.3448827E 03 | -5.3931393E 03 | -5.2495495E 03 |
| 7 Q7   | -5.8395518E 03 | -5.6140216E 03 | -5.7276530E 03 | -5.5100844E 03 |
| 8 Q8   | -4.7326460E 03 | -4.5386456E 03 | -4.6373875E 03 | -4.4502517E 03 |
| 9 Q9   | 1.3769512E-04  | 1.3332426E-04  | 1.3519051E-04  | 1.3088009E-04  |
| 10 Q10 | 1.1691003E 03  | 1.1374448E 03  | 1.1452269E 03  | 1.1125724E 03  |
| 11 Q11 | 2.7913883E 03  | 2.7079150E 03  | 2.7506959E 03  | 2.6667683E 03  |
| 12 Q12 | 3.5613432E 03  | 3.4655523E 03  | 3.5013239E 03  | 3.4039556E 03  |
| 13 Q13 | 4.4158217E 03  | 4.3039218E 03  | 4.3518450E 03  | 4.2386835E 03  |
| 14 Q14 | 2.7617845E 03  | 2.6920259E 03  | 2.7341498E 03  | 2.6640389E 03  |
| 15 Q15 | 3.7217113E 03  | 3.6213372E 03  | 3.6670422E 03  | 3.5650663E 03  |
| 16 Q16 | 7.4724383E 03  | 7.2159538E 03  | 7.2886075E 03  | 7.0355367E 03  |
| 17 Q17 | 5.8190993E 03  | 5.6179384E 03  | 5.6724522E 03  | 5.4732626E 03  |
| 18 Q18 | -8.3512701E-06 | -8.0999366E-06 | -8.1678007E-06 | -7.9137887E-06 |
| 19 Q25 | -2.3552988E 02 | -2.3419068E 02 | -2.4380728E 02 | -2.4311568E 02 |
| 20 Q30 | -3.7415572E 03 | -3.6418262E 03 | -3.6906029E 03 | -3.5913589E 03 |
| 21 Q31 | 5.8844505E 02  | 5.7841818E 02  | 6.0701095E 02  | 5.9928983E 02  |
| 22 Q32 | -7.8244892E 02 | -7.5613995E 02 | -7.3711087E 02 | -7.0753846E 02 |
| 23 Q33 | 4.6326746E 02  | 4.6489007E 02  | 4.6353077E 02  | 4.6539257E 02  |
| 24 Q34 | -1.6594658E 03 | -1.6113200E 03 | -1.6257683E 03 | -1.5763805E 03 |
| 25 Q35 | 5.4088054E 02  | 5.3431438E 02  | 5.4645466E 02  | 5.4055877E 02  |
| 26 Q36 | -1.1528663E 03 | -1.1197257E 03 | -1.1210349E 03 | -1.0866569E 03 |
| 27 Q37 | -7.0276964E 02 | -6.8641749E 02 | -6.9294894E 02 | -6.7638890E 02 |
| 28 Q38 | -4.7019782E 02 | -4.6048880E 02 | -4.6704820E 02 | -4.5773310E 02 |
| 29 P40 | -8.7871466E 03 | -8.4976913E 03 | -8.6913680E 03 | -8.4041308E 03 |
| 30 P41 | -1.1012479E 04 | -1.0639730E 04 | -1.0752602E 04 | -1.0370552E 04 |
| 31 P42 | -1.5258898E 04 | -1.4814759E 04 | -1.4924448E 04 | -1.4467134E 04 |
| 32 P43 | -2.2533451E 04 | -2.1925813E 04 | -2.2054465E 04 | -2.1428288E 04 |
| 33 P44 | -2.2884442E 04 | -2.2267340E 04 | -2.2397996E 04 | -2.1762064E 04 |
| 34 P45 | -2.5379090E 04 | -2.4702401E 04 | -2.4871414E 04 | -2.4178154E 04 |
| 35 P46 | -2.6975931E 04 | -2.6262204E 04 | -2.6457908E 04 | -2.5729659E 04 |
| 36 P47 | -2.7260400E 04 | -2.6459893E 04 | -2.6737181E 04 | -2.5934390E 04 |
| 37 P48 | -3.3717518E 04 | -3.2653145E 04 | -3.3064397E 04 | -3.2006997E 04 |
| 38 P49 | -3.0465188E 04 | -2.9503481E 04 | -2.9875065E 04 | -2.8919660E 04 |
| 39 P50 | 1.5296357E 03  | 1.5111185E 03  | 1.6392372E 03  | 1.6323470E 03  |
| 40 P51 | -5.1474254E 03 | -4.9725136E 03 | -5.0176806E 03 | -4.8373144E 03 |
| 41 P52 | -1.1946098E 04 | -1.1604750E 04 | -1.1723264E 04 | -1.1375418E 04 |
| 42 P53 | -2.3110831E 04 | -2.2504606E 04 | -2.2764980E 04 | -2.2151442E 04 |
| 43 P54 | -2.1775146E 04 | -2.1203957E 04 | -2.1449285E 04 | -2.0871205E 04 |
| 44 P55 | -2.2620835E 04 | -2.2018290E 04 | -2.2247013E 04 | -2.1635668E 04 |
| 45 P56 | -2.8112291E 04 | -2.7349251E 04 | -2.7611890E 04 | -2.6835435E 04 |
| 46 P57 | -2.6793825E 04 | -2.6066571E 04 | -2.6316892E 04 | -2.5576853E 04 |
| 47 P58 | -2.7169942E 04 | -2.6350796E 04 | -2.6597703E 04 | -2.5774187E 04 |
| 48 P59 | -2.8189058E 04 | -2.7281439E 04 | -2.7530921E 04 | -2.6630808E 04 |
| 49 P60 | -2.7872330E 04 | -2.6982566E 04 | -2.7229314E 04 | -2.6339063E 04 |
| 50 P62 | 1.2609455E 03  | 1.2278796E 03  | 1.2405370E 03  | 1.2069720E 03  |

| (SIC)  | PLAFO          | PLAFP          | PLAAO          | PLAAP          |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 1.2606928E 03  | 1.2276335E 03  | 1.2402884E 03  | 1.2067301E 03  |
| 52 P64 | 1.4699631E 02  | 1.4308571E 02  | 1.4404772E 02  | 1.4002738E 02  |
| 53 P67 | 9.4401798E 02  | 9.2929279E 02  | 9.3455583E 02  | 9.1956239E 02  |
| 54 P68 | 9.4382876E 02  | 9.2910651E 02  | 9.3436853E 02  | 9.1937810E 02  |
| 55 P69 | 2.6412112E 02  | 2.5829947E 02  | 2.5993988E 02  | 2.5399218E 02  |
| 56 P72 | -2.7182814E 02 | -2.5902703E 02 | -2.6395855E 02 | -2.5062071E 02 |
| 57 P73 | -2.7177368E 02 | -2.5897514E 02 | -2.6390567E 02 | -2.5057050E 02 |
| 58 P74 | 4.4701806E 02  | 4.3650421E 02  | 4.4000977E 02  | 4.2934144E 02  |
| 59 P77 | 4.8170128E 03  | 4.6830593E 03  | 4.7115455E 03  | 4.5745981E 03  |
| 60 P79 | 4.4309351E 03  | 4.5064088E 03  | 4.3407806E 03  | 4.2142911E 03  |
| 61 P80 | 4.4300472E 03  | 4.3055457E 03  | 4.3399108E 03  | 4.2134466E 03  |
| 62 P81 | -9.7285799E 01 | -9.4473457E 01 | -9.4402220E 01 | -9.1323633E 01 |
| 63 P82 | 5.5056274E 02  | 5.2938291E 02  | 5.3802732E 02  | 5.1668767E 02  |
| 64 P83 | -7.8195263E 02 | -7.1084588E 02 | -7.2952076E 02 | -6.6461872E 02 |
| 65 P84 | -1.1839893E 03 | -1.1033538E 03 | -1.1555132E 03 | -1.0821158E 03 |
| 66 P93 | -6.3983933E 03 | -6.1700839E 03 | -6.2097825E 03 | -5.9731111E 03 |
| 67 P94 | -1.3461816E 04 | -1.3027758E 04 | -1.3148821E 04 | -1.2703375E 04 |
| 68 P95 | -1.6046664E 04 | -1.5583449E 04 | -1.5734608E 04 | -1.5260499E 04 |
| 69 P96 | 5.5702682E 03  | 5.3419320E 03  | 5.4581501E 03  | 5.2378934E 03  |
| 70 P97 | 8.7733756E 03  | 8.4700881E 03  | 8.5522779E 03  | 8.2519623E 03  |
| 71 Q19 | 1.6520086E 03  | 1.6133283E 03  | 1.6554860E 03  | 1.6188114E 03  |
| 72 Q20 | 5.3744631E 02  | 5.3853607E 02  | 5.7377841E 02  | 5.7833063E 02  |
| 73 Q21 | 8.8822845E 02  | 8.6334543E 02  | 8.6758291E 02  | 8.4175839E 02  |
| 74 Q22 | -8.8301818E 01 | -8.4572306E 01 | -9.1447897E 01 | -8.8219253E 01 |
| 75 Q23 | 6.4019990E 02  | 6.2076186E 02  | 6.2599164E 02  | 6.0587273E 02  |
| 76 Q24 | 3.1180620E 02  | 2.9695168E 02  | 2.9846912E 02  | 2.8291445E 02  |
| 77 Q26 | 1.2464486E 03  | 1.2050079E 03  | 1.2093515E 03  | 1.1662571E 03  |
| 78 Q28 | 1.9187570E 03  | 1.8586176E 03  | 1.8469919E 03  | 1.7844250E 03  |

| (SIC) |     | NMAFO          | NMAFP          | NMAAO          | NMAAP          |
|-------|-----|----------------|----------------|----------------|----------------|
| 1     | Q1  | 1.7393051E 03  | 1.5599356E 03  | 1.7006299E 03  | 1.5160914E 03  |
| 2     | Q2  | 2.6766763E 03  | 2.4822754E 03  | 2.6233829E 03  | 2.4207572E 03  |
| 3     | Q3  | 1.3411697E 03  | 1.1174034E 03  | 1.2867071E 03  | 1.0555663E 03  |
| 4     | Q4  | 1.4440636E 03  | 1.1688254E 03  | 1.3761167E 03  | 1.0929060E 03  |
| 5     | Q5  | 8.8168164E 02  | 5.5463858E 02  | 8.1312180E 02  | 4.8122430E 02  |
| 6     | Q6  | 3.8645902E 02  | 1.0193569E 02  | 3.2927958E 02  | 4.2102112E 01  |
| 7     | Q7  | -1.0291930E 03 | -1.4802531E 03 | -1.0972551E 03 | -1.5323930E 03 |
| 8     | Q8  | -7.2551044E 02 | -1.1135115E 03 | -7.8345141E 02 | -1.1577238E 03 |
| 9     | Q9  | 3.6796831E-06  | 1.2421378E-05  | 5.2031158E-06  | 1.3823940E-05  |
| 10    | Q10 | -4.1416000E 02 | -3.5084951E 02 | -3.9963907E 02 | -3.3433029E 02 |
| 11    | Q11 | 1.2770116E 02  | 2.9464714E 02  | 1.5245237E 02  | 3.2030718E 02  |
| 12    | Q12 | -3.9528593E 02 | -2.0370496E 02 | -3.5877920E 02 | -1.6404302E 02 |
| 13    | Q13 | 9.1722283E 01  | 3.1552107E 02  | 1.3063611E 02  | 3.5695892E 02  |
| 14    | Q14 | 6.4549357E 02  | 7.8501054E 02  | 6.6230249E 02  | 8.0252399E 02  |
| 15    | Q15 | -9.8392994E 01 | 1.0235427E 02  | -6.5140580E 01 | 1.3881102E 02  |
| 16    | Q16 | -1.7730273E 03 | -1.2600613E 03 | -1.6612125E 03 | -1.1550718E 03 |
| 17    | Q17 | -1.6834432E 03 | -1.2811236E 03 | -1.5942453E 03 | -1.1958669E 03 |
| 18    | Q18 | 2.5385846E-06  | 2.0359208E-06  | 2.4269896E-06  | 1.9189668E-06  |
| 19    | Q25 | -6.7449398E 02 | -6.7717250E 02 | -6.6945932E 02 | -6.7084243E 02 |
| 20    | Q30 | -5.7065142E 02 | -7.7011295E 02 | -6.0164431E 02 | -8.0013239E 02 |
| 21    | Q31 | 1.7072928E 03  | 1.7273476E 03  | 1.6960004E 03  | 1.7114430E 03  |
| 22    | Q32 | 2.0945866E 03  | 2.0419700E 03  | 2.0670100E 03  | 2.0078655E 03  |
| 23    | Q33 | 3.9910015E 02  | 3.9585455E 02  | 3.9893990E 02  | 3.9521621E 02  |
| 24    | Q34 | 5.5146925E 02  | 4.5517806E 02  | 5.3097280E 02  | 4.3219737E 02  |
| 25    | Q35 | 7.7876327E 02  | 7.9189538E 02  | 7.7537284E 02  | 7.8716427E 02  |
| 26    | Q36 | 8.3270674E 02  | 7.6642622E 02  | 8.1334540E 02  | 7.4458949E 02  |
| 27    | Q37 | -3.9626779E 01 | -7.2330630E 01 | -4.5600156E 01 | -7.8720046E 01 |
| 28    | Q38 | -2.9105639E 02 | -3.1047441E 02 | -2.9297222E 02 | -3.1160235E 02 |
| 29    | P40 | -2.5779408E 03 | -3.1568517E 03 | -2.6361987E 03 | -3.2106720E 03 |
| 30    | P41 | 5.3830023E 03  | 4.6375082E 03  | 5.2249324E 03  | 4.4608331E 03  |
| 31    | P42 | 6.4501635E 03  | 5.5618910E 03  | 6.2467348E 03  | 5.3321065E 03  |
| 32    | P43 | 8.7325848E 03  | 7.5173195E 03  | 8.4412429E 03  | 7.1888911E 03  |
| 33    | P44 | 8.8686074E 03  | 7.6344126E 03  | 8.5727276E 03  | 7.3008683E 03  |
| 34    | P45 | 7.3895389E 03  | 6.0361701E 03  | 7.0807456E 03  | 5.6942285E 03  |
| 35    | P46 | 6.1944680E 03  | 4.7670265E 03  | 5.8793805E 03  | 4.4228901E 03  |
| 36    | P47 | 3.6151562E 03  | 2.0141506E 03  | 3.2969087E 03  | 1.6913307E 03  |
| 37    | P48 | 2.6455368E 03  | 5.1679839E 02  | 2.2482762E 03  | 1.3347912E 02  |
| 38    | P49 | 2.3903534E 03  | 4.6694900E 02  | 2.0314117E 03  | 1.2060409E 02  |
| 39    | P50 | 8.2859979E 03  | 8.3230356E 03  | 8.2193332E 03  | 8.2331150E 03  |
| 40    | P51 | 3.1058481E 03  | 2.7560268E 03  | 3.0269311E 03  | 2.6661988E 03  |
| 41    | P52 | 2.4973410E 03  | 1.8146486E 03  | 2.3618021E 03  | 1.6661115E 03  |
| 42    | P53 | 6.1378818E 01  | -1.1510669E 03 | -1.4898489E 02 | -1.3760594E 03 |
| 43    | P54 | 5.7831722E 01  | -1.0845410E 03 | -1.4037399E 02 | -1.2965301E 03 |
| 44    | P55 | 2.0444048E 03  | 8.3932241E 02  | 1.8170278E 03  | 5.9434159E 02  |
| 45    | P56 | 4.6427511E 03  | 3.1166804E 03  | 4.3383824E 03  | 2.7854780E 03  |
| 46    | P57 | 4.4250060E 03  | 2.9705080E 03  | 4.1349123E 03  | 2.6548390E 03  |
| 47    | P58 | 6.2537954E 03  | 4.6155133E 03  | 5.9057313E 03  | 4.2587025E 03  |
| 48    | P59 | 7.9435414E 03  | 6.1443141E 03  | 7.5480959E 03  | 5.7478773E 03  |
| 49    | P60 | 7.8565185E 03  | 6.0770021E 03  | 7.4654051E 03  | 5.6849083E 03  |
| 50    | P62 | -9.3533843E 01 | -2.7402137E 01 | -8.1120367E 01 | -1.3990335E 01 |

| (SIC)  | NMAFO          | NMAFP          | NMAAO          | NMAAP          |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | -9.3515100E 01 | -2.7396654E 01 | -8.1104119E 01 | -1.3987534E 01 |
| 52 P64 | -4.6384399E 01 | -3.8563221E 01 | -4.4590915E 01 | -3.6550241E 01 |
| 53 P67 | 2.0176941E 02  | 2.3121944E 02  | 2.0752466E 02  | 2.3751150E 02  |
| 54 P68 | 2.0172900E 02  | 2.3117313E 02  | 2.0748310E 02  | 2.3746393E 02  |
| 55 P69 | -2.0170499E 01 | -8.5272772E 00 | -1.7627279E 01 | -5.7318705E 00 |
| 56 P72 | 2.6146309E 02  | 2.3586068E 02  | 2.5667637E 02  | 2.3000048E 02  |
| 57 P73 | 2.6141069E 02  | 2.3581340E 02  | 2.5662495E 02  | 2.2995438E 02  |
| 58 P74 | -1.8707184E 01 | 2.3202812E 00  | -1.4444411E 01 | 6.8920832E 00  |
| 59 P77 | -1.7581877E 03 | -1.4902830E 03 | -1.6940374E 03 | -1.4201437E 03 |
| 60 P79 | -1.1560590E 03 | -9.0700760E 02 | -1.1012224E 03 | -8.4824375E 02 |
| 61 P80 | -1.1558273E 03 | -9.0682584E 02 | -1.1010017E 03 | -8.4807377E 02 |
| 62 P81 | 1.1236852E 02  | 1.0674402E 02  | 1.1061464E 02  | 1.0445754E 02  |
| 63 P82 | -1.5461469E 02 | -1.1225477E 02 | -1.4698988E 02 | -1.0431035E 02 |
| 64 P83 | 4.2860673E 02  | 2.8639424E 02  | 3.9671515E 02  | 2.6691136E 02  |
| 65 P84 | -1.1004162E 03 | -1.2616867E 03 | -1.1177367E 03 | -1.2645315E 03 |
| 66 P93 | 5.3707270E 03  | 4.9141119E 03  | 5.2560048E 03  | 4.7826625E 03  |
| 67 P94 | 6.3744459E 03  | 5.5063341E 03  | 6.1840665E 03  | 5.2931766E 03  |
| 68 P95 | 4.4108305E 03  | 3.4844061E 03  | 4.2210222E 03  | 3.2728078E 03  |
| 69 P96 | 8.5391716E 02  | 1.3105898E 03  | 9.2211301E 02  | 1.3626272E 03  |
| 70 P97 | -2.5381040E 03 | -1.9315324E 03 | -2.4036216E 03 | -1.8029920E 03 |
| 71 Q19 | 1.7472554E 03  | 1.8246165E 03  | 1.7451404E 03  | 1.8184898E 03  |
| 72 Q20 | 2.6828044E 03  | 2.6806257E 03  | 2.6607054E 03  | 2.6516013E 03  |
| 73 Q21 | -4.6115627E 02 | -4.1139085E 02 | -4.4859871E 02 | -3.9694991E 02 |
| 74 Q22 | -3.0458485E 02 | -3.1204421E 02 | -3.0267134E 02 | -3.0912877E 02 |
| 75 Q23 | -3.0923791E 02 | -2.7036211E 02 | -3.0059578E 02 | -2.6035806E 02 |
| 76 Q24 | -5.0698233E 02 | -4.7727348E 02 | -4.9887007E 02 | -4.6776080E 02 |
| 77 Q26 | -1.0818533E 03 | -9.9897249E 02 | -1.0592890E 03 | -9.7310042E 02 |
| 78 Q28 | -2.2401815E 03 | -2.1199043E 03 | -2.1965306E 03 | -2.0713973E 03 |

| (SIC) |     | PHAFO          | PHAFP          | PHAAO          | PHAAP          |
|-------|-----|----------------|----------------|----------------|----------------|
| 1     | Q1  | -2.3704486E 03 | -2.2123352E 03 | -2.3142075E 03 | -2.1505019E 03 |
| 2     | Q2  | -3.5789274E 03 | -3.4010741E 03 | -3.4956496E 03 | -3.3356922E 03 |
| 3     | Q3  | -3.6093179E 03 | -3.4001679E 03 | -3.5232768E 03 | -3.3189416E 03 |
| 4     | Q4  | -4.5289730E 03 | -4.2648931E 03 | -4.4188480E 03 | -4.1664222E 03 |
| 5     | Q5  | -4.2458403E 03 | -3.9281637E 03 | -4.1345059E 03 | -3.8244110E 03 |
| 6     | Q6  | -3.5509412E 03 | -3.2664225E 03 | -3.4549298E 03 | -3.1785638E 03 |
| 7     | Q7  | -2.8626899E 03 | -2.3958080E 03 | -2.7420965E 03 | -2.2996366E 03 |
| 8     | Q8  | -2.4788939E 03 | -2.0743269E 03 | -2.3750620E 03 | -1.9910264E 03 |
| 9     | Q9  | 7.9190840E-05  | 7.0379791E-05  | 7.6602973E-05  | 6.8143213E-05  |
| 10    | Q10 | 5.9041351E 02  | 5.5171298E 02  | 5.7542627E 02  | 5.3554044E 02  |
| 11    | Q11 | 1.1807566E 03  | 1.0340395E 03  | 1.1473149E 03  | 9.7494624E 02  |
| 12    | Q12 | 2.1651522E 03  | 1.9880224E 03  | 2.1093973E 03  | 1.9188551E 03  |
| 13    | Q13 | 2.3476999E 03  | 2.1336526E 03  | 2.2862120E 03  | 2.0487713E 03  |
| 14    | Q14 | 1.0793567E 03  | 9.4029313E 02  | 1.0514464E 03  | 8.7452052E 02  |
| 15    | Q15 | 2.2521111E 03  | 2.0523371E 03  | 2.1966267E 03  | 1.9596534E 03  |
| 16    | Q16 | 5.7733418E 03  | 5.2661690E 03  | 5.5874496E 03  | 5.1850976E 03  |
| 17    | Q17 | 4.8419231E 03  | 4.4385620E 03  | 4.6912133E 03  | 4.3614479E 03  |
| 18    | Q18 | -6.8341321E-06 | -6.3418053E-06 | -6.6500495E-06 | -6.2054880E-06 |
| 19    | Q25 | 3.8566995E 02  | 3.9006349E 02  | 3.7752160E 02  | 3.8920726E 02  |
| 20    | Q30 | -1.5668529E 03 | -1.3766696E 03 | -1.5187282E 03 | -1.2936373E 03 |
| 21    | Q31 | -6.9205498E 02 | -7.3291909E 02 | -6.8049107E 02 | -7.4668284E 02 |
| 22    | Q32 | -1.6731657E 03 | -1.6495278E 03 | -1.6373147E 03 | -1.6386170E 03 |
| 23    | Q33 | -2.5601381E 01 | -2.4293229E 01 | -2.6043782E 01 | -1.7958565E 01 |
| 24    | Q34 | -1.3263756E 03 | -1.2359855E 03 | -1.2940525E 03 | -1.1959982E 03 |
| 25    | Q35 | -3.1819717E 02 | -3.3175984E 02 | -3.1239249E 02 | -3.3551624E 02 |
| 26    | Q36 | -1.2959211E 03 | -1.2335723E 03 | -1.2646214E 03 | -1.2090460E 03 |
| 27    | Q37 | -3.4988679E 02 | -3.1905966E 02 | -3.4071484E 02 | -3.0937217E 02 |
| 28    | Q38 | -7.2576739E 01 | -5.1155646E 01 | -6.8714611E 01 | -4.6182905E 01 |
| 29    | P40 | -2.3158670E 03 | -1.7801224E 03 | -2.2376550E 03 | -1.5626867E 03 |
| 30    | P41 | -9.3984207E 03 | -8.7418454E 03 | -9.1679103E 03 | -8.4857129E 03 |
| 31    | P42 | -1.2663908E 04 | -1.1870069E 04 | -1.2358439E 04 | -1.1555754E 04 |
| 32    | P43 | -1.8645609E 04 | -1.7534854E 04 | -1.8195510E 04 | -1.7101014E 04 |
| 33    | P44 | -1.8936041E 04 | -1.7807984E 04 | -1.8478932E 04 | -1.7367387E 04 |
| 34    | P45 | -1.9536766E 04 | -1.8269948E 04 | -1.9051093E 04 | -1.7807483E 04 |
| 35    | P46 | -1.9843566E 04 | -1.8482482E 04 | -1.9339663E 04 | -1.8007542E 04 |
| 36    | P47 | -1.8453965E 04 | -1.6886333E 04 | -1.7931902E 04 | -1.6413794E 04 |
| 37    | P48 | -2.1846961E 04 | -1.9729329E 04 | -2.1183430E 04 | -1.9143156E 04 |
| 38    | P49 | -1.9739642E 04 | -1.7826274E 04 | -1.9140115E 04 | -1.7296641E 04 |
| 39    | P50 | -4.6321859E 03 | -4.7439838E 03 | -4.5469954E 03 | -4.7898277E 03 |
| 40    | P51 | -4.5541476E 03 | -4.2645471E 03 | -4.4452645E 03 | -4.1518224E 03 |
| 41    | P52 | -7.9925748E 03 | -7.3732767E 03 | -7.7900525E 03 | -7.1417073E 03 |
| 42    | P53 | -1.2311503E 04 | -1.1175771E 04 | -1.1989608E 04 | -1.0744436E 04 |
| 43    | P54 | -1.1599963E 04 | -1.0529870E 04 | -1.1296672E 04 | -1.0123464E 04 |
| 44    | P55 | -1.3985247E 04 | -1.2837726E 04 | -1.3625847E 04 | -1.2379981E 04 |
| 45    | P56 | -1.9343351E 04 | -1.7875912E 04 | -1.8854142E 04 | -1.7273637E 04 |
| 46    | P57 | -1.8436148E 04 | -1.7037532E 04 | -1.7969883E 04 | -1.6463503E 04 |
| 47    | P58 | -2.0453990E 04 | -1.8856547E 04 | -1.9883957E 04 | -1.8394889E 04 |
| 48    | P59 | -2.2748403E 04 | -2.0973339E 04 | -2.2091601E 04 | -2.0542060E 04 |
| 49    | P60 | -2.2499190E 04 | -2.0743572E 04 | -2.1849583E 04 | -2.0311701E 04 |
| 50    | P62 | 7.6649457E 02  | 7.0379937E 02  | 7.4727956E 02  | 6.7957776E 02  |



| (SIC)  | PHAF0          | PHAF0          | PHAF0          | PHAF0          | PHAF0 |
|--------|----------------|----------------|----------------|----------------|-------|
| 51 P63 | 7.6684089E 02  | 7.0365835E 02  | 7.4712985E 02  | 6.7944158E 02  |       |
| 52 P64 | 1.0808655E 02  | 1.0120439E 02  | 1.0542535E 02  | 9.8566837E 01  |       |
| 53 P67 | 4.0460629E 02  | 3.7401890E 02  | 3.9442396E 02  | 3.6176198E 02  |       |
| 54 P68 | 4.0452520E 02  | 3.7394394E 02  | 3.9434489E 02  | 3.6168946E 02  |       |
| 55 P69 | 1.6271641E 02  | 1.5157422E 02  | 1.5862074E 02  | 1.4734863E 02  |       |
| 56 P72 | -2.8412481E 02 | -2.6389769E 02 | -2.7824853E 02 | -2.5452730E 02 |       |
| 57 P73 | -2.8406786E 02 | -2.6384482E 02 | -2.7819277E 02 | -2.5447631E 02 |       |
| 58 P74 | 2.6158390E 02  | 2.4148916E 02  | 2.5477686E 02  | 2.3399509E 02  |       |
| 59 P77 | 3.9668230E 03  | 3.7173137E 03  | 3.8659345E 03  | 3.6281810E 03  |       |
| 60 P79 | 3.3093883E 03  | 3.0748602E 03  | 3.2227771E 03  | 2.9910875E 03  |       |
| 61 P80 | 3.3087252E 03  | 3.0742440E 03  | 3.2221313E 03  | 2.9904880E 03  |       |
| 62 P81 | -1.2039263E 02 | -1.1647968E 02 | -1.1810965E 02 | -1.1446645E 02 |       |
| 63 P82 | 4.1900600E 02  | 3.7866582E 02  | 4.0705383E 02  | 3.6734138E 02  |       |
| 64 P83 | -7.3355542E 02 | -5.9672406E 02 | -6.8222248E 02 | -5.5730620E 02 |       |
| 65 P84 | 3.4261608E 01  | 2.0579226E 02  | 6.7384998E 01  | 2.2531944E 02  |       |
| 66 P93 | -6.7079097E 03 | -6.3376241E 03 | -6.5486745E 03 | -6.1980148E 03 |       |
| 67 P94 | -1.1280365E 04 | -1.0522649E 04 | -1.1003794E 04 | -1.0234734E 04 |       |
| 68 P95 | -1.1421254E 04 | -1.0590681E 04 | -1.1140148E 04 | -1.0267220E 04 |       |
| 69 P96 | 2.9176287E 03  | 2.4414581E 03  | 2.7954198E 03  | 2.3434145E 03  |       |
| 70 P97 | 7.3001007E 03  | 6.6919586E 03  | 7.0728775E 03  | 6.5756947E 03  |       |
| 71 Q19 | -5.9372506E 02 | -6.6457149E 02 | -5.8721291E 02 | -6.9394627E 02 |       |
| 72 Q20 | -1.7622034E 03 | -1.7685483E 03 | -1.7279534E 03 | -1.7736039E 03 |       |
| 73 Q21 | 6.2068227E 02  | 5.6663979E 02  | 6.0544367E 02  | 5.7176927E 02  |       |
| 74 Q22 | -2.1708116E 01 | -2.1104090E 00 | -2.0513485E 01 | 3.5435100E 00  |       |
| 75 Q23 | 4.9598177E 02  | 4.6463909E 02  | 4.8421978E 02  | 4.4859762E 02  |       |
| 76 Q24 | 4.4522176E 02  | 4.2431381E 02  | 4.3482401E 02  | 4.1310861E 02  |       |
| 77 Q26 | 1.4404720E 03  | 1.3681585E 03  | 1.4063623E 03  | 1.3374293E 03  |       |
| 78 Q28 | 2.8150195E 03  | 2.7042420E 03  | 2.7447242E 03  | 2.6693301E 03  |       |

| (SIC)  | NHAF0          | NHAF1          | NHAF2          | NHAF3          |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 9.7339592E 02  | 8.3255153E 02  | 9.4946650E 02  | 8.0526959E 02  |
| 2 Q2   | 1.7982312E 03  | 2.0855204E 03  | 1.7575038E 03  | 2.0123540E 03  |
| 3 Q3   | 1.8217254E 03  | 1.9032013E 03  | 1.7795149E 03  | 1.8381665E 03  |
| 4 Q4   | 2.2633889E 03  | 2.1549570E 03  | 2.2097402E 03  | 2.0846336E 03  |
| 5 Q5   | 1.8826861E 03  | 1.8259297E 03  | 1.8323743E 03  | 1.7593140E 03  |
| 6 Q6   | 1.5899496E 03  | 1.5347507E 03  | 1.5462074E 03  | 1.4776801E 03  |
| 7 Q7   | 1.1999143E 03  | 9.4286306E 02  | 1.1449461E 03  | 8.9376347E 02  |
| 8 Q8   | 1.0119902E 03  | 7.8493274E 02  | 9.6512526E 02  | 7.4350693E 02  |
| 9 Q9   | -3.5554309E-05 | -3.3637581E-05 | -3.4359530E-05 | -3.2225442E-05 |
| 10 Q10 | -4.4752418E 02 | -3.8998803E 02 | -4.3771939E 02 | -3.7824829E 02 |
| 11 Q11 | -4.9885106E 02 | -6.2854917E 02 | -4.8405702E 02 | -6.0016396E 02 |
| 12 Q12 | -1.0688179E 03 | -1.0621272E 03 | -1.0418728E 03 | -1.0234233E 03 |
| 13 Q13 | -1.0685369E 03 | -1.0815166E 03 | -1.0403015E 03 | -1.0400448E 03 |
| 14 Q14 | -4.2633812E 02 | -4.4799374E 02 | -4.1459785E 02 | -4.2831371E 02 |
| 15 Q15 | -1.0348511E 03 | -9.7957579E 02 | -1.0093097E 03 | -9.4390191E 02 |
| 16 Q16 | -2.7253841E 03 | -2.4225029E 03 | -2.6374422E 03 | -2.3310065E 03 |
| 17 Q17 | -2.3595394E 03 | -2.0962878E 03 | -2.2871030E 03 | -2.0196520E 03 |
| 18 Q18 | 3.4232602E-06  | 3.0931028E-06  | 3.3334501E-06  | 2.9879920E-06  |
| 19 Q25 | -3.4467544E 02 | -1.9890115E 02 | -3.3821120E 02 | -1.9709677E 02 |
| 20 Q30 | 5.9237275E 02  | 6.6161112E 02  | 5.7205754E 02  | 6.3100044E 02  |
| 21 Q31 | 7.1961441E 02  | 4.1453758E 02  | 7.0784441E 02  | 4.1236671E 02  |
| 22 Q32 | 1.2511247E 03  | 8.2906593E 02  | 1.2268465E 03  | 8.1477256E 02  |
| 23 Q33 | 4.0418207E 01  | 2.3916427E 01  | 4.0180413E 01  | 2.3747757E 01  |
| 24 Q34 | 7.1497775E 02  | 6.2014450E 02  | 6.9837535E 02  | 6.0058800E 02  |
| 25 Q35 | 2.7357523E 02  | 1.9493147E 02  | 2.6886660E 02  | 1.9226072E 02  |
| 26 Q36 | 7.4517348E 02  | 6.4223014E 02  | 7.2832404E 02  | 6.2370168E 02  |
| 27 Q37 | 1.0811925E 02  | 1.7267809E 02  | 1.0474634E 02  | 1.6473489E 02  |
| 28 Q38 | -3.8980486E 01 | -3.3397180E 00 | -3.9626693E 01 | -5.3882739E 00 |
| 29 P40 | -6.5189626E 01 | 1.6889706E 02  | -8.3219931E 01 | 1.3073062E 02  |
| 30 P41 | 4.4803969E 03  | 4.8429682E 03  | 4.3716561E 03  | 4.6669430E 03  |
| 31 P42 | 6.4085173E 03  | 6.5895079E 03  | 6.2583964E 03  | 6.3626625E 03  |
| 32 P43 | 9.5739566E 03  | 9.3880054E 03  | 9.3504877E 03  | 9.0765181E 03  |
| 33 P44 | 9.7230847E 03  | 9.5342370E 03  | 9.4961350E 03  | 9.2178980E 03  |
| 34 P45 | 9.5584882E 03  | 9.3407259E 03  | 9.3252529E 03  | 9.0212126E 03  |
| 35 P46 | 9.5066140E 03  | 9.2640253E 03  | 9.2678658E 03  | 8.9408692E 03  |
| 36 P47 | 8.6494818E 03  | 8.1761081E 03  | 8.4045495E 03  | 7.8728165E 03  |
| 37 P48 | 1.0037547E 04  | 9.2565489E 03  | 9.7287382E 03  | 8.8965670E 03  |
| 38 P49 | 9.0693432E 03  | 8.3635791E 03  | 8.7903217E 03  | 8.0384202E 03  |
| 39 P50 | 3.4978947E 03  | 2.6449652E 03  | 3.4369730E 03  | 2.5989294E 03  |
| 40 P51 | 2.2265467E 03  | 2.4377870E 03  | 2.1743146E 03  | 2.4577883E 03  |
| 41 P52 | 3.6879761E 03  | 4.0302987E 03  | 3.5943442E 03  | 3.8782295E 03  |
| 42 P53 | 5.1888601E 03  | 5.9126791E 03  | 5.0478695E 03  | 5.6723191E 03  |
| 43 P54 | 4.8889715E 03  | 5.5709577E 03  | 4.7561294E 03  | 5.3444885E 03  |
| 44 P55 | 6.5334214E 03  | 6.5485638E 03  | 6.3658169E 03  | 6.4074111E 03  |
| 45 P56 | 9.3852730E 03  | 8.9465929E 03  | 9.1515712E 03  | 8.6326710E 03  |
| 46 P57 | 8.9451036E 03  | 8.5269984E 03  | 8.7223629E 03  | 8.2287519E 03  |
| 47 P58 | 9.9465779E 03  | 9.1409905E 03  | 9.6733898E 03  | 8.3171873E 03  |
| 48 P59 | 1.1176738E 04  | 1.0080780E 04  | 1.0859904E 04  | 9.7243215E 03  |
| 49 P60 | 1.1054295E 04  | 9.9703437E 03  | 1.0740931E 04  | 9.6177899E 03  |
| 50 P62 | -3.6349969E 02 | -3.9611843E 02 | -3.5422045E 02 | -3.8105697E 02 |

| (SIC)  | NHAF0          | NHAFP          | NHAA0          | NHAAP          |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | -3.6342684E 02 | -3.9603904E 02 | -3.5414945E 02 | -3.8098062E 02 |
| 52 P64 | -5.9448642E 01 | -4.5984151E 01 | -5.8063009E 01 | -4.4665184E 01 |
| 53 P67 | -2.1161737E 02 | -1.6203990E 02 | -2.0650223E 02 | -1.5710194E 02 |
| 54 P68 | -2.1157494E 02 | -1.6200741E 02 | -2.0646085E 02 | -1.5707045E 02 |
| 55 P69 | -8.4458063E 01 | -7.4617490E 01 | -8.2411219E 01 | -7.2192824E 01 |
| 56 P72 | 1.2189417E 02  | 1.9797730E 02  | 1.1936163E 02  | 1.8981080E 02  |
| 57 P73 | 1.2186975E 02  | 1.9793763E 02  | 1.1933771E 02  | 1.8977277E 02  |
| 58 P74 | -1.2684762E 02 | -1.1994915E 02 | -1.2359515E 02 | -1.1572051E 02 |
| 59 P77 | -2.0097668E 03 | -1.9120696E 03 | -1.9601684E 03 | -1.8480554E 03 |
| 60 P79 | -1.6285312E 03 | -1.5523187E 03 | -1.5867527E 03 | -1.4984495E 03 |
| 61 P80 | -1.6282048E 03 | -1.5520076E 03 | -1.5864347E 03 | -1.4981492E 03 |
| 62 P81 | 6.4559841E 01  | 7.6861822E 01  | 6.3375675E 01  | 7.4307242E 01  |
| 63 P82 | -1.6584121E 02 | -1.4896882E 02 | -1.6073339E 02 | -1.4279258E 02 |
| 64 P83 | 2.3468935E 02  | 1.1055763E 02  | 2.1184236E 02  | 1.0065818E 02  |
| 65 P84 | -1.0236280E 02 | -2.6569878E 02 | -1.1710514E 02 | -2.6617878E 02 |
| 66 P93 | 3.4861973E 03  | 3.1329730E 03  | 3.4064261E 03  | 3.0359101E 03  |
| 67 P94 | 5.4940000E 03  | 5.7669975E 03  | 5.3616199E 03  | 5.5621180E 03  |
| 68 P95 | 5.4223443E 03  | 5.9027122E 03  | 5.2900876E 03  | 5.6855347E 03  |
| 69 P96 | -1.1911004E 03 | -9.2385653E 02 | -1.1359410E 03 | -8.7509886E 02 |
| 70 P97 | -3.5574448E 03 | -3.1605444E 03 | -3.4482336E 03 | -3.0450015E 03 |
| 71 Q19 | 4.4653881E 02  | 2.8259088E 02  | 4.4090744E 02  | 2.8295790E 02  |
| 72 Q20 | 1.0538138E 03  | 8.2833629E 02  | 1.0342868E 03  | 8.1179554E 02  |
| 73 Q21 | -4.6560657E 02 | -3.6135530E 02 | -4.5563085E 02 | -3.5179995E 02 |
| 74 Q22 | -1.8136979E 02 | 5.7840956E 00  | -1.7879552E 02 | 4.3604179E-01  |
| 75 Q23 | -3.3690063E 02 | -2.5662087E 02 | -3.2970878E 02 | -2.4974270E 02 |
| 76 Q24 | -3.2772350E 02 | -2.2361256E 02 | -3.2093040E 02 | -2.1873561E 02 |
| 77 Q26 | -8.4545232E 02 | -7.4404202E 02 | -8.2677364E 02 | -7.2218038E 02 |
| 78 Q28 | -1.6193429E 03 | -1.3611923E 03 | -1.5816076E 03 | -1.3233797E 03 |

## VI. ANALYSIS FOR UNIT ANTI-SYMMETRICAL LOADING

The input static equations on page 32 and the configuration 5C flexibility matrix (AIJ) were used to develop, through use of the program, the GINGIM matrix, the triple product, GRN, AMN, and GIM for unit anti-symmetrical loading.

This data is given on pages 53-203, and is required for subsequent unsymmetrical flight stress analysis, since any unsymmetrical flight loading is composed of a symmetrical portion plus an anti-symmetrical portion.

7. JUNE 1963

JOB 153

REDUNDANT STRESS ANALYSIS

E = 10400000.0

5-C ANTI-SYMMETRIC

INTERNAL LOADS IN STATIC STRUCTURE  
CONFIGURATION 5. ANTI-SYMMETRIC

PAGE 154

| GIRGIM |     | Q19            | Q20            | Q21            | Q22            |
|--------|-----|----------------|----------------|----------------|----------------|
| 1      | Q1  | 1.6578464E-01  | -1.5314410E-01 | 0.             | 0.             |
| 2      | Q2  | 3.8260167E-01  | 2.8390511E-01  | -5.9669454E-01 | -9.6193106E-01 |
| 3      | Q3  | 2.9253455E-01  | 2.1707184E-01  | -1.4350564E-01 | -2.0158781E-01 |
| 4      | Q4  | 7.6423032E-01  | -3.6195228E-01 | 4.2002463E-01  | -6.9243795E-01 |
| 5      | Q5  | 2.8422853E-01  | 7.6547994E-02  | -2.6501045E-02 | -2.2104950E-01 |
| 6      | Q6  | 2.8422858E-01  | 7.6547964E-02  | -2.6501053E-02 | -2.2104959E-01 |
| 7      | Q7  | 2.8422858E-01  | 7.6547961E-02  | -2.6501055E-02 | -2.2104959E-01 |
| 8      | Q8  | 2.8422858E-01  | 7.6547961E-02  | -2.6501055E-02 | -2.2104959E-01 |
| 9      | Q9  | -2.0518803E 00 | 4.8129053E-01  | 3.1320312E-01  | 2.7449046E 00  |
| 10     | Q10 | -1.5717068E-01 | 1.4518692E-01  | 0.             | 0.             |
| 11     | Q11 | 3.2376424E-01  | 3.5921520E-01  | -1.0023296E 00 | -6.1475939E-01 |
| 12     | Q12 | 2.4679271E-01  | 2.7381565E-01  | -1.9583663E-01 | -1.5313632E-01 |
| 13     | Q13 | 1.2189698E 00  | -8.0891744E-01 | 8.7033688E-01  | -1.1452022E 00 |
| 14     | Q14 | 2.8917631E-01  | 7.8548914E-02  | -2.6413804E-02 | -2.2584640E-01 |
| 15     | Q15 | 2.8917635E-01  | 7.8548898E-02  | -2.6413812E-02 | -2.2584647E-01 |
| 16     | Q16 | 7.3321044E-01  | -8.5914847E-02 | -1.0154049E-01 | -8.8945868E-01 |
| 17     | Q17 | 7.3321049E-01  | -8.5914860E-02 | -1.0154050E-01 | -8.8945874E-01 |
| 18     | Q18 | 1.5278210E-01  | -1.5006030E-01 | -3.4919903E-01 | 3.6435472E-01  |
| 19     | Q25 | -9.9999998E-01 | 9.9999998E-01  | -9.9999998E-01 | 9.9999998E-01  |
| 20     | Q30 | -4.4420809E-01 | 1.6452819E-01  | 7.5156118E-02  | 6.6387225E-01  |
| 21     | Q31 | 3.8259883E-01  | 2.2089212E-01  | -8.7446858E-01 | -5.3633831E-01 |
| 22     | Q32 | 2.3298753E-01  | 3.5356275E-01  | -5.3251670E-01 | -8.5846996E-01 |
| 23     | Q33 | 0.             | 0.             | 4.6382567E-01  | 2.5752093E-01  |
| 24     | Q34 | 0.             | 0.             | 2.6079375E-01  | 4.4524173E-01  |
| 25     | Q35 | 7.9598828E-01  | -7.9598828E-01 | 7.9598828E-01  | -7.9598828E-01 |
| 26     | Q36 | 4.2287092E-01  | -4.2287092E-01 | 4.2287092E-01  | -4.2287092E-01 |
| 27     | Q37 | -7.6848916E-01 | 6.8545828E-01  | -4.9799271E-01 | 9.4522048E-01  |
| 28     | Q38 | -3.9236803E-01 | 3.4997489E-01  | -2.5426047E-01 | 4.8260187E-01  |
| 29     | P40 | 2.8455110E 00  | -1.9792450E 01 | 0.             | 0.             |
| 30     | P41 | 9.4124477E 00  | -1.4919531E 01 | -1.0241606E 01 | -3.3674389E 01 |
| 31     | P42 | 1.4433774E 01  | -1.1193514E 01 | -1.2704866E 01 | -3.7134624E 01 |
| 32     | P43 | 2.7550946E 01  | -1.7406027E 01 | -5.4956049E 00 | -4.9019558E 01 |
| 33     | P44 | 2.7537171E 01  | -1.7397324E 01 | -5.4928570E 00 | -4.8995049E 01 |
| 34     | P45 | 3.3132778E 01  | -1.5890324E 01 | -6.0145831E 00 | -5.3346851E 01 |
| 35     | P46 | 3.8728670E 01  | -1.4383247E 01 | -6.5363358E 00 | -5.7698874E 01 |
| 36     | P47 | 4.3986897E 01  | -1.2967110E 01 | -7.0266052E 00 | -6.1788292E 01 |
| 37     | P48 | 4.9245127E 01  | -1.1550973E 01 | -7.5168748E 00 | -6.5877709E 01 |
| 38     | P49 | 0.             | 0.             | 0.             | 0.             |
| 39     | P50 | 2.4736664E 01  | -3.1036491E 00 | 0.             | 0.             |
| 40     | P51 | 1.7815604E 01  | -1.0782529E 01 | 4.2803499E 01  | 1.3141619E 01  |
| 41     | P52 | 1.2539448E 01  | -1.6636406E 01 | 4.6990271E 01  | 1.6415506E 01  |
| 42     | P53 | -3.4895137E 01 | 2.2032551E 01  | 7.0084607E 00  | 6.2274172E 01  |
| 43     | P54 | -2.9384992E 01 | 1.8553483E 01  | 5.9016998E 00  | 5.2439876E 01  |
| 44     | P55 | -3.5357987E 01 | 1.6931040E 01  | 6.4472823E 00  | 5.7104778E 01  |
| 45     | P56 | -4.1331300E 01 | 1.5308510E 01  | 6.9928939E 00  | 6.1769931E 01  |
| 46     | P57 | -3.9392862E 01 | 1.4590541E 01  | 6.6649272E 00  | 5.8872921E 01  |
| 47     | P58 | -4.4739404E 01 | 1.3136194E 01  | 7.1530381E 00  | 6.3046271E 01  |
| 48     | P59 | -5.0085950E 01 | 1.1681848E 01  | 7.6411492E 00  | 6.7219622E 01  |
| 49     | P60 | 0.             | 0.             | 0.             | 0.             |
| 50     | P62 | -3.6667704E 00 | 3.6014472E 00  | 8.3807769E 00  | -8.7445134E 00 |

| GIRGIM | Q19            | Q20            | Q21            | Q22            |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | -3.6660355E 00 | 3.6007254E 00  | 8.3790971E 00  | -8.7427609E 00 |
| 52 P64 | 4.7553352E-01  | -4.6706194E-01 | -1.0868803E 00 | 1.1340523E 00  |
| 53 P67 | 0.             | 0.             | -5.8039287E 00 | 5.8298620E 00  |
| 54 P68 | 0.             | 0.             | -5.8027655E 00 | 5.8286936E 00  |
| 55 P69 | 0.             | 0.             | 7.5269578E-01  | -7.5605900E-01 |
| 56 P72 | -1.2166828E 01 | 1.2166828E 01  | -1.2166828E 01 | 1.2166828E 01  |
| 57 P73 | -1.2164390E 01 | 1.2164390E 01  | -1.2164390E 01 | 1.2164390E 01  |
| 58 P74 | 1.5778830E 00  | -1.5778830E 00 | 1.5778830E 00  | -1.5778830E 00 |
| 59 P77 | 1.1935593E 01  | -7.5360518E 00 | -2.3971518E 00 | -2.1300023E 01 |
| 60 P79 | 1.3763497E 01  | -1.2276430E 01 | 8.9189569E 00  | -1.6928723E 01 |
| 61 P80 | 1.3760739E 01  | -1.2273970E 01 | 8.9171692E 00  | -1.6925330E 01 |
| 62 P81 | -1.7849507E 00 | 1.5920970E 00  | -1.1566754E 00 | 2.1954402E 00  |
| 63 P82 | -8.3754870E-01 | 5.2914317E-01  | 1.6706635E-01  | 1.4901945E 00  |
| 64 P83 | 0.             | 0.             | 0.             | 0.             |
| 65 P84 | 0.             | 0.             | 0.             | 0.             |
| 66 P93 | -1.8356860E 01 | 1.8356860E 01  | 0.             | 0.             |
| 67 P94 | -1.8356860E 01 | 1.8356860E 01  | -1.8356860E 01 | 1.8356860E 01  |
| 68 P95 | -1.8356860E 01 | 1.8356860E 01  | -1.8356860E 01 | 1.8356860E 01  |
| 69 P96 | -2.3127478E 01 | 4.0069515E 00  | 3.3630714E 00  | 2.9362946E 01  |
| 70 P97 | 5.6301553E 00  | 6.2221073E-01  | 2.4022878E 00  | -1.2161990E 01 |
| 71 Q19 | 1.0000000E 00  | 0.             | 0.             | 0.             |
| 72 Q20 | 0.             | 1.0000000E 00  | 0.             | 0.             |
| 73 Q21 | 0.             | 0.             | 1.0000000E 00  | 0.             |
| 74 Q22 | 0.             | 0.             | 0.             | 1.0000000E 00  |
| 75 Q23 | 0.             | 0.             | 0.             | 0.             |
| 76 Q24 | 0.             | 0.             | 0.             | 0.             |
| 77 Q26 | 0.             | 0.             | 0.             | 0.             |
| 78 Q28 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | Q23            | Q24            | Q26            | Q28            |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 0.             | 0.             | 0.             | 0.             |
| 2 Q2   | 1.1641532E-09  | 0.             | -7.4505806E-09 | 1.8626451E-09  |
| 3 Q3   | -5.5206296E-01 | -9.7599282E-01 | 0.             | 9.3132257E-10  |
| 4 Q4   | 4.4171891E-01  | -6.7406368E-01 | -1.5258652E 00 | -9.3132257E-10 |
| 5 Q5   | -7.5120532E-03 | -2.0436350E-01 | -1.8712129E-01 | -2.0502558E-01 |
| 6 Q6   | -7.5120565E-03 | -2.0436358E-01 | -1.8712137E-01 | -2.0502558E-01 |
| 7 Q7   | -7.5120571E-03 | -2.0436359E-01 | -1.8712137E-01 | -2.0502558E-01 |
| 8 Q8   | -7.5120571E-03 | -2.0436359E-01 | -1.8712137E-01 | -2.0502558E-01 |
| 9 Q9   | 1.0280301E-01  | 2.5447002E 00  | 2.4009756E 00  | 6.5245119E-01  |
| 10 Q10 | 0.             | 0.             | 0.             | 0.             |
| 11 Q11 | 2.3283064E-10  | 0.             | 7.4505806E-09  | 1.8626451E-09  |
| 12 Q12 | -1.0030674E 00 | -5.7669637E-01 | 2.2351742E-08  | 1.8626451E-09  |
| 13 Q13 | 8.9581442E-01  | -1.1260742E 00 | -1.5806720E 00 | 9.3132257E-10  |
| 14 Q14 | -3.2396125E-03 | -2.0827698E-01 | -1.9580349E-01 | -1.2091746E 00 |
| 15 Q15 | -3.2396149E-03 | -2.0827704E-01 | -1.9580355E-01 | -1.2091746E 00 |
| 16 Q16 | -2.5445648E-02 | -8.2343445E-01 | -7.8179026E-01 | -8.2200462E-01 |
| 17 Q17 | -2.5445650E-02 | -8.2343451E-01 | -7.8179029E-01 | -8.2200462E-01 |
| 18 Q18 | 0.             | 0.             | 0.             | 0.             |
| 19 Q25 | -1.0000567E 00 | 1.0000567E 00  | 9.9999998E-01  | 0.             |
| 20 Q30 | 2.2214724E-02  | 6.1539847E-01  | 5.8621631E-01  | 6.1309075E-01  |
| 21 Q31 | 0.             | 0.             | 0.             | 0.             |
| 22 Q32 | 0.             | 0.             | 0.             | 0.             |
| 23 Q33 | -8.1881125E-01 | -4.7076145E-01 | 0.             | 0.             |
| 24 Q34 | -4.6039035E-01 | -8.1392466E-01 | 0.             | 0.             |
| 25 Q35 | 1.3097329E 00  | -5.2194790E-01 | -1.2280049E 00 | 0.             |
| 26 Q36 | 6.9579910E-01  | 7.6417959E-02  | -1.2098934E 00 | 0.             |
| 27 Q37 | -5.2844526E-01 | 9.1624112E-01  | 1.1822938E 00  | -2.7703554E-01 |
| 28 Q38 | -2.6980864E-01 | 4.6780586E-01  | 9.9643958E-01  | -1.4144622E-01 |
| 29 P40 | 0.             | 0.             | 0.             | 0.             |
| 30 P41 | -5.5879353E-08 | -1.1920929E-07 | 0.             | 0.             |
| 31 P42 | -9.4761057E 00 | -3.3917719E 01 | 0.             | 5.9604645E-08  |
| 32 P43 | -1.8944864E 00 | -4.5487280E 01 | -4.3353698E 01 | 0.             |
| 33 P44 | -1.8935391E 00 | -4.5464537E 01 | -4.3332021E 01 | 0.             |
| 34 P45 | -2.0414290E 00 | -4.9487841E 01 | -4.7015879E 01 | -4.0363386E 00 |
| 35 P46 | -2.1893263E 00 | -5.3511350E 01 | -5.0699924E 01 | -8.0728823E 00 |
| 36 P47 | -2.3282993E 00 | -5.7292078E 01 | -5.4161668E 01 | -1.1865855E 01 |
| 37 P48 | -2.4672724E 00 | -6.1072804E 01 | -5.7623415E 01 | -1.5658829E 01 |
| 38 P49 | 0.             | 0.             | 0.             | 0.             |
| 39 P50 | 0.             | 0.             | 0.             | 0.             |
| 40 P51 | -7.4505806E-09 | -2.3841858E-07 | -3.5762787E-07 | -5.9604645E-08 |
| 41 P52 | 4.2823377E 01  | 1.2329133E 01  | -2.3841858E-07 | -5.9604645E-08 |
| 42 P53 | 2.2956275E 00  | 5.7779114E 01  | 5.5166637E 01  | -1.1920929E-07 |
| 43 P54 | 1.9331346E 00  | 4.8655455E 01  | 4.6455505E 01  | 0.             |
| 44 P55 | 2.0000494E 00  | 5.2957458E 01  | 5.0499864E 01  | 4.3205441E 00  |
| 45 P56 | 2.0669679E 00  | 5.7259691E 01  | 5.4544442E 01  | 8.6413183E 00  |
| 46 P57 | 1.9700271E 00  | 5.4574211E 01  | 5.1986308E 01  | 8.2360406E 00  |
| 47 P58 | 2.0297990E 00  | 5.8422878E 01  | 5.5604424E 01  | 1.2100947E 01  |
| 48 P59 | 2.0895709E 00  | 6.2271546E 01  | 5.9222543E 01  | 1.5965854E 01  |
| 49 P60 | 0.             | 0.             | 0.             | 0.             |
| 50 P62 | 0.             | 0.             | 0.             | 0.             |



| GIRGIM | Q23            | Q24            | Q26            | Q28            |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 0.             | 0.             | 0.             | 0.             |
| 52 P64 | 0.             | 0.             | 0.             | 0.             |
| 53 P67 | 1.0245923E 01  | -1.0657286E 01 | 0.             | 0.             |
| 54 P68 | 1.0243870E 01  | -1.0655150E 01 | 0.             | 0.             |
| 55 P69 | -1.3287660E 00 | 1.3821146F 00  | 0.             | 0.             |
| 56 P72 | -2.0019509E 01 | 2.0056465E 01  | -2.6781866E-01 | 0.             |
| 57 P73 | -2.0015496E 01 | 2.0052446E 01  | -2.6776499E-01 | 0.             |
| 58 P74 | 2.5962759E 00  | -2.6010687E 00 | 3.4732679E-02  | 0.             |
| 59 P77 | -7.8520039E-01 | -1.5762868E 01 | -1.8869292E 01 | 1.4679230E 01  |
| 60 P79 | 9.4643558E 00  | -1.6409708E 01 | -6.1821713E 00 | 4.9616547E 00  |
| 61 P80 | 9.4624592E 00  | -1.6406419E 01 | -6.1809323E 00 | 4.9606603E 00  |
| 62 P81 | -1.2274067E 00 | 2.1281306E 00  | 8.0174904E-01  | -6.4346356E-01 |
| 63 P82 | 5.7592362E-02  | 1.3828132E 00  | 1.3179525E 00  | -1.8626451E-09 |
| 64 P83 | 0.             | 0.             | 0.             | 0.             |
| 65 P84 | 0.             | 0.             | 0.             | 0.             |
| 66 P93 | 0.             | 0.             | 0.             | 0.             |
| 67 P94 | 0.             | 0.             | 0.             | 0.             |
| 68 P95 | -1.8357900E 01 | 1.8357900E 01  | 0.             | 0.             |
| 69 P96 | 1.0921192E 00  | 2.7215731E 01  | 2.5622160E 01  | 8.4890200E 00  |
| 70 P97 | -2.4682280E-01 | -7.9873146E 00 | -7.5833658E 00 | -7.9734448E 00 |
| 71 Q19 | 0.             | 0.             | 0.             | 0.             |
| 72 Q20 | 0.             | 0.             | 0.             | 0.             |
| 73 Q21 | 0.             | 0.             | 0.             | 0.             |
| 74 Q22 | 0.             | 0.             | 0.             | 0.             |
| 75 Q23 | 1.0000000E 00  | 0.             | 0.             | 0.             |
| 76 Q24 | 0.             | 1.0000000E 00  | 0.             | 0.             |
| 77 Q26 | 0.             | 0.             | 1.0000000E 00  | 0.             |
| 78 Q28 | 0.             | 0.             | 0.             | 1.0000000E 00  |

| GIRGIM | P100           | P101           | P102           | P103           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | -1.1362135E-07 | -7.6702445E-02 | -1.4767473E-01 | 0.             |
| 2 Q2   | -9.2666595E-08 | -5.6229756E-02 | -1.0825878E-01 | -3.5855919E-08 |
| 3 Q3   | -7.1013345E-08 | -4.2992879E-02 | -8.2773910E-02 | -2.7474016E-08 |
| 4 Q4   | -5.6810676E-08 | -3.3938141E-02 | -6.5340879E-02 | -2.1769665E-08 |
| 5 Q5   | -4.2112619E-02 | -7.2726141E-02 | -1.0105268E-01 | -3.1585029E-02 |
| 6 Q6   | -4.2112619E-02 | -7.2726149E-02 | -1.0105269E-01 | -3.1585029E-02 |
| 7 Q7   | -4.2112620E-02 | -7.2726151E-02 | -1.0105269E-01 | -3.1585029E-02 |
| 8 Q8   | -4.2112620E-02 | -7.2726151E-02 | -1.0105269E-01 | -3.1585029E-02 |
| 9 Q9   | 1.3401488E-01  | 3.8144886E-01  | 6.1039827E-01  | 1.0051283E-01  |
| 10 Q10 | 1.5130412E-01  | 7.2717077E-02  | 8.7907888E-07  | 0.             |
| 11 Q11 | 1.1049241E-01  | 5.3102906E-02  | 6.8054516E-07  | 1.3090035E-01  |
| 12 Q12 | 8.4224024E-02  | 4.0478259E-02  | 5.1875286E-07  | 9.9780189E-02  |
| 13 Q13 | 6.6338278E-02  | 3.1882329E-02  | 4.0859091E-07  | 7.8590944E-02  |
| 14 Q14 | 6.0130875E-02  | 2.8899037E-02  | 3.7025467E-07  | 7.0872713E-02  |
| 15 Q15 | 6.0130886E-02  | 2.8899041E-02  | 3.7025473E-07  | 7.0872720E-02  |
| 16 Q16 | 1.6656730E-01  | 8.0052618E-02  | 1.0159147E-06  | 1.6214046E-01  |
| 17 Q17 | 1.6656730E-01  | 8.0052623E-02  | 1.0159147E-06  | 1.6214047E-01  |
| 18 Q18 | -7.6104277E-09 | -7.6104277E-09 | -7.6104277E-09 | -6.0679066E-09 |
| 19 Q25 | 0.             | 0.             | 0.             | 0.             |
| 20 Q30 | -1.0647811E-01 | -5.1173621E-02 | -6.4591294E-07 | -9.1303502E-02 |
| 21 Q31 | 1.1202720E-08  | 1.1202720E-08  | 1.1202720E-08  | 1.5065521E-08  |
| 22 Q32 | -1.1605645E-08 | -1.1605645E-08 | -1.1605645E-08 | -9.2533522E-09 |
| 23 Q33 | 0.             | 0.             | 0.             | 0.             |
| 24 Q34 | 0.             | 0.             | 0.             | 0.             |
| 25 Q35 | 0.             | 0.             | 0.             | 0.             |
| 26 Q36 | 0.             | 0.             | 0.             | 0.             |
| 27 Q37 | -5.6903477E-02 | -2.7347938E-02 | -3.4344642E-07 | -4.2678418E-02 |
| 28 Q38 | -2.9053247E-02 | -1.3963055E-02 | -1.7535367E-07 | -2.1790349E-02 |
| 29 P40 | -1.9669533E-06 | -1.3165131E 00 | -2.5346743E 00 | 0.             |
| 30 P41 | -3.5762787E-06 | -2.2816350E 00 | -4.3928171E 00 | -6.1094760E-07 |
| 31 P42 | -4.7832727E-06 | -3.0196035E 00 | -5.8136230E 00 | -1.0803342E-06 |
| 32 P43 | -5.7518482E-06 | -3.6021143E 00 | -6.9351273E 00 | -1.4454126E-06 |
| 33 P44 | -5.7667494E-06 | -3.6003133E 00 | -6.9316598E 00 | -1.4603138E-06 |
| 34 P45 | -8.2907691E-01 | -5.0320728E 00 | -8.9210837E 00 | -6.2181590E-01 |
| 35 P46 | -1.6581902E 00 | -6.4639053E 00 | -1.0910609E 01 | -1.2436620E 00 |
| 36 P47 | -2.4372737E 00 | -7.8093390E 00 | -1.2787084E 01 | -1.8279850E 00 |
| 37 P48 | -3.2163572E 00 | -9.1547729E 00 | -1.4649559E 01 | -2.4123081E 00 |
| 38 P49 | 0.             | 0.             | 0.             | 0.             |
| 39 P50 | -3.2344055E 00 | -1.5544621E 00 | -1.8831755E-05 | 0.             |
| 40 P51 | -5.5963851E 00 | -2.6896349E 00 | -3.3379667E-05 | -2.7982371E 00 |
| 41 P52 | -7.3970022E 00 | -3.5550156E 00 | -4.4470031E-05 | -4.9314278E 00 |
| 42 P53 | -8.8151056E 00 | -4.2365594E 00 | -5.3204418E-05 | -6.6114547E 00 |
| 43 P54 | -7.4231493E 00 | -3.5675821E 00 | -4.4803132E-05 | -5.5674677E 00 |
| 44 P55 | -8.6651646E 00 | -4.1644975E 00 | -5.2450816E-05 | -7.0313578E 00 |
| 45 P56 | -9.9072460E 00 | -4.7614447E 00 | -6.0098908E-05 | -8.4953258E 00 |
| 46 P57 | -9.4425962E 00 | -4.5381330E 00 | -5.7280269E-05 | -8.0968951E 00 |
| 47 P58 | -1.0554246E 01 | -5.0723944E 00 | -6.4125299E-05 | -9.4013788E 00 |
| 48 P59 | -1.1665896E 01 | -5.6066560E 00 | -7.0970335E-05 | -1.0717863E 01 |
| 49 P60 | 0.             | 0.             | 0.             | 0.             |
| 50 P62 | 1.8265027E-07  | 1.8265027E-07  | 1.8265027E-07  | 1.4562976E-07  |

| GIRGIM | P100           | P101           | P102           | P103           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 1.8261366E-07  | 1.8261366E-07  | 1.8261366E-07  | 1.4560057E-07  |
| 52 P64 | -2.3687418E-08 | -2.3687418E-08 | -2.3687418E-08 | -1.8886330E-08 |
| 53 P67 | 0.             | 0.             | 0.             | 0.             |
| 54 P68 | 0.             | 0.             | 0.             | 0.             |
| 55 P69 | 0.             | 0.             | 0.             | 0.             |
| 56 P72 | 0.             | 0.             | 0.             | 0.             |
| 57 P73 | 0.             | 0.             | 0.             | 0.             |
| 58 P74 | 0.             | 0.             | 0.             | 0.             |
| 59 P77 | 3.0151339E 00  | 1.4490801E 00  | 1.8198131E-05  | 2.2613934E 00  |
| 60 P79 | 1.0191307E 00  | 4.8979646E-01  | 6.1510613E-06  | 7.6436250E-01  |
| 61 P80 | 1.0189264E 00  | 4.8969830E-01  | 6.1498286E-06  | 7.6420932E-01  |
| 62 P81 | -1.3216829E-01 | -6.3520375E-02 | -7.9771446E-07 | -9.9128101E-02 |
| 63 P82 | 1.7508864E-07  | 1.0950426E-01  | 2.1082785E-01  | 4.4004992E-08  |
| 64 P83 | 0.             | 0.             | 0.             | 0.             |
| 65 P84 | 0.             | 0.             | 0.             | 0.             |
| 66 P93 | 0.             | 0.             | 0.             | 0.             |
| 67 P94 | 0.             | 0.             | 0.             | 0.             |
| 68 P95 | 0.             | 0.             | 0.             | 0.             |
| 69 P96 | 1.7436623E 00  | 4.4963326E 00  | 7.0433648E 00  | 1.3077689E 00  |
| 70 P97 | 1.6157029E 00  | 7.7651048E-01  | 9.9281937E-06  | 1.5727626E 00  |
| 71 Q19 | 0.             | 0.             | 0.             | 0.             |
| 72 Q20 | 0.             | 0.             | 0.             | 0.             |
| 73 Q21 | 0.             | 0.             | 0.             | 0.             |
| 74 Q22 | 0.             | 0.             | 0.             | 0.             |
| 75 Q23 | 0.             | 0.             | 0.             | 0.             |
| 76 Q24 | 0.             | 0.             | 0.             | 0.             |
| 77 Q26 | 0.             | 0.             | 0.             | 0.             |
| 78 Q28 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | P104           | P105           | P106           | P107           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 0.             | 0.             | 0.             | 0.             |
| 2 Q2   | -6.5021666E-02 | -1.2796561E-01 | -2.3283064E-10 | -9.3132257E-10 |
| 3 Q3   | -4.9715121E-02 | -9.7841610E-02 | -3.2130629E-08 | -5.6837531E-02 |
| 4 Q4   | -3.9244607E-02 | -7.7235166E-02 | -2.5378540E-08 | -4.4866973E-02 |
| 5 Q5   | -6.6835740E-02 | -1.0104733E-01 | -2.1057783E-02 | -6.1285362E-02 |
| 6 Q6   | -6.6835745E-02 | -1.0104734E-01 | -2.1057784E-02 | -6.1285366E-02 |
| 7 Q7   | -6.6835746E-02 | -1.0104734E-01 | -2.1057784E-02 | -6.1285366E-02 |
| 8 Q8   | -6.6835746E-02 | -1.0104734E-01 | -2.1057784E-02 | -6.1285366E-02 |
| 9 Q9   | 3.2275956E-01  | 5.3818236E-01  | 6.7012049E-02  | 2.6772915E-01  |
| 10 Q10 | 0.             | 0.             | 0.             | 0.             |
| 11 Q11 | 6.4203670E-02  | 1.4505460E-08  | -9.3132257E-10 | -4.6566129E-10 |
| 12 Q12 | 4.8939968E-02  | 1.1056942E-08  | 1.1534027E-01  | 5.7081881E-02  |
| 13 Q13 | 3.8547114E-02  | 8.7088979E-09  | 9.0846691E-02  | 4.4960045E-02  |
| 14 Q14 | 3.4761493E-02  | 7.8536176E-09  | 8.1617308E-02  | 4.0392421E-02  |
| 15 Q15 | 3.4761496E-02  | 7.8536185E-09  | 8.1617314E-02  | 4.0392424E-02  |
| 16 Q16 | 7.9526289E-02  | 1.7967270E-08  | 1.5771816E-01  | 7.8054740E-02  |
| 17 Q17 | 7.9526293E-02  | 1.7967271E-08  | 1.5771817E-01  | 7.8054743E-02  |
| 18 Q18 | -3.8052140E-02 | -4.4304087E-09 | 0.             | 0.             |
| 19 Q25 | 0.             | 0.             | 0.             | 5.3620588E-17  |
| 20 Q30 | -4.4782333E-02 | -1.0117615E-08 | -7.6130664E-02 | -3.7677073E-02 |
| 21 Q31 | 5.6013603E-02  | 1.2655087E-08  | 0.             | 0.             |
| 22 Q32 | -5.8028221E-02 | -1.3111523E-08 | 0.             | 0.             |
| 23 Q33 | 9.3192710E-09  | 0.             | 1.2164094E-08  | 4.6596357E-02  |
| 24 Q34 | -9.4798789E-09 | 0.             | -7.8803296E-09 | -4.7399395E-02 |
| 25 Q35 | 0.             | 0.             | 0.             | 8.0012602E-09  |
| 26 Q36 | 0.             | 0.             | 0.             | -8.0042729E-09 |
| 27 Q37 | -2.0932811E-02 | -4.7293233E-09 | -2.8453749E-02 | -1.4081760E-02 |
| 28 Q38 | -1.0687679E-02 | -2.4146538E-09 | -1.4527650E-02 | -7.1897338E-03 |
| 29 P40 | 0.             | 0.             | 0.             | 0.             |
| 30 P41 | -1.1160254E 00 | -2.1963890E 00 | 0.             | -1.4901161E-08 |
| 31 P42 | -1.9693805E 00 | -3.8758305E 00 | -5.4761766E-07 | -9.7561052E-01 |
| 32 P43 | -2.6429710E 00 | -5.2014872E 00 | -9.8347661E-07 | -1.7457028E 00 |
| 33 P44 | -2.6416495E 00 | -5.1988865E 00 | -9.9092720E-07 | -1.7448299E 00 |
| 34 P45 | -3.9574448E 00 | -7.1882052E 00 | -4.1456556E-01 | -2.9513549E 00 |
| 35 P46 | -5.2733068E 00 | -9.1776253E 00 | -8.2915120E-01 | -4.1579412E 00 |
| 36 P47 | -6.5097682E 00 | -1.1047001E 01 | -1.2187202E 00 | -5.2917203E 00 |
| 37 P48 | -7.7462295E 00 | -1.2916377E 01 | -1.6082892E 00 | -6.4254997E 00 |
| 38 P49 | 0.             | 0.             | 0.             | 0.             |
| 39 P50 | 0.             | 0.             | 0.             | 0.             |
| 40 P51 | -1.3724722E 00 | -3.1008104E-07 | 5.9604645E-08  | 1.4901161E-08  |
| 41 P52 | -2.4187550E 00 | -5.4646628E-07 | -2.4658480E 00 | -1.2203478E 00 |
| 42 P53 | -3.2427709E 00 | -7.3263509E-07 | -4.4078642E 00 | -2.1814520E 00 |
| 43 P54 | -2.7307186E 00 | -6.1694776E-07 | -3.7118369E 00 | -1.8369881E 00 |
| 44 P55 | -3.4487241E 00 | -7.7916582E-07 | -5.3976588E 00 | -2.6713017E 00 |
| 45 P56 | -4.1667680E 00 | -9.4139251E-07 | -7.0835705E 00 | -3.5056597E 00 |
| 46 P57 | -3.9713466E 00 | -8.9724120E-07 | -6.7513511E 00 | -3.3412443E 00 |
| 47 P58 | -4.6141098E 00 | -1.0424598E-06 | -8.2607197E 00 | -4.0882311E 00 |
| 48 P59 | -5.2568731E 00 | -1.1876785E-06 | -9.7700886E 00 | -4.8352181E 00 |
| 49 P60 | 0.             | 0.             | 0.             | 0.             |
| 50 P62 | 9.1325138E-01  | 1.0632981E-07  | 0.             | 0.             |

| GIRGIM | P104           | P105           | P106           | P107           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 9.1306826E-01  | 1.0630850E-07  | 0.             | 0.             |
| 52 P64 | 3.8156290E-01  | 8.6210371E-08  | 0.             | 0.             |
| 53 P67 | 2.1097339E-07  | 0.             | 1.7537564E-07  | 1.0548670E 00  |
| 54 P68 | 2.1093110E-07  | 0.             | 1.7534049E-07  | 1.0546555E 00  |
| 55 P69 | -2.7360567E-08 | 0.             | -2.2743991E-08 | 3.6319715E-01  |
| 56 P72 | 0.             | 0.             | 0.             | 2.3029868E-07  |
| 57 P73 | 0.             | 0.             | 0.             | 2.3025252E-07  |
| 58 P74 | 0.             | 0.             | 0.             | -2.9866813E-08 |
| 59 P77 | 1.1091629E 00  | 2.5059178E-07  | 1.5076735E 00  | 7.4614760E-01  |
| 60 P79 | 3.7490273E-01  | 8.4701297E-08  | 5.0960132E-01  | 2.5220171E-01  |
| 61 P80 | 3.7482760E-01  | 8.4684323E-08  | 5.0949920E-01  | 2.5215116E-01  |
| 62 P81 | -4.8620120E-02 | -1.0984682E-08 | -6.6088814E-02 | -3.2707356E-02 |
| 63 P82 | 8.0346309E-02  | 1.5812519E-01  | 3.0035152E-08  | 5.3069359E-02  |
| 64 P83 | 0.             | 0.             | 0.             | 0.             |
| 65 P84 | 0.             | 0.             | 0.             | 0.             |
| 66 P93 | 0.             | 0.             | 0.             | 0.             |
| 67 P94 | 0.             | 0.             | 0.             | 0.             |
| 68 P95 | 0.             | 0.             | 0.             | 0.             |
| 69 P96 | 3.8569936E 00  | 6.3283741E 00  | 8.7189136E-01  | 3.2572437E 00  |
| 70 P97 | 1.1405108E 00  | 2.1725749E-07  | 1.5298662E 00  | 7.5713099E-01  |
| 71 Q19 | 0.             | 0.             | 0.             | 0.             |
| 72 Q20 | 0.             | 0.             | 0.             | 0.             |
| 73 Q21 | 0.             | 0.             | 0.             | 0.             |
| 74 Q22 | 0.             | 0.             | 0.             | 0.             |
| 75 Q23 | 0.             | 0.             | 0.             | 0.             |
| 76 Q24 | 0.             | 0.             | 0.             | 0.             |
| 77 Q26 | 0.             | 0.             | 0.             | 0.             |
| 78 Q28 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | P108           | P109           | P110           | P111           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 0.             | 0.             | 0.             | 0.             |
| 2 Q2   | 9.3132257E-10  | 0.             | 4.6566129E-10  | 9.3132257E-10  |
| 3 Q3   | -1.1290505E-01 | 5.8207662E-11  | 0.             | 0.             |
| 4 Q4   | -8.9126089E-02 | -2.8638169E-08 | -5.0473214E-02 | -1.0101215E-01 |
| 5 Q5   | -1.0103866E-01 | -1.0528705E-02 | -5.5738087E-02 | -1.0102404E-01 |
| 6 Q6   | -1.0103867E-01 | -1.0528705E-02 | -5.5738088E-02 | -1.0102404E-01 |
| 7 Q7   | -1.0103867E-01 | -1.0528705E-02 | -5.5738088E-02 | -1.0102404E-01 |
| 8 Q8   | -1.0103867E-01 | -1.0528705E-02 | -5.5738088E-02 | -1.0102404E-01 |
| 9 Q9   | 4.6595204E-01  | 3.3505432E-02  | 2.1345336E-01  | 3.9369194E-01  |
| 10 Q10 | 0.             | 0.             | 0.             | 0.             |
| 11 Q11 | -2.2204461E-16 | -9.3132257E-10 | -9.3132257E-10 | -2.2204461E-16 |
| 12 Q12 | 1.6906199E-08  | -1.8626451E-09 | -9.3132257E-10 | -1.1102230E-16 |
| 13 Q13 | 1.3316012E-08  | 1.0309705E-01  | 5.1495594E-02  | 1.4805596E-08  |
| 14 Q14 | 1.1963199E-08  | 9.2357047E-02  | 4.6131130E-02  | 1.3263242E-08  |
| 15 Q15 | 1.1963200E-08  | 9.2357049E-02  | 4.6131132E-02  | 1.3263243E-08  |
| 16 Q16 | 2.3117813E-08  | 1.5328537E-01  | 7.6564023E-02  | 2.2013058E-08  |
| 17 Q17 | 2.3117814E-08  | 1.5328538E-01  | 7.6564025E-02  | 2.2013059E-08  |
| 18 Q18 | 0.             | 0.             | 0.             | 0.             |
| 19 Q25 | 0.             | 7.3300325E-17  | 2.6810296E-10  | 8.1555294E-17  |
| 20 Q30 | -1.1158984E-08 | -6.0952195E-02 | -3.0444816E-02 | -8.7532436E-09 |
| 21 Q31 | 0.             | 0.             | 0.             | 0.             |
| 22 Q32 | 0.             | 0.             | 0.             | 0.             |
| 23 Q33 | 1.3800654E-08  | 0.             | 0.             | 0.             |
| 24 Q34 | -5.0507931E-09 | 0.             | 0.             | 0.             |
| 25 Q35 | 0.             | 1.0270481E-08  | 4.0006303E-02  | 1.1502287E-08  |
| 26 Q36 | 0.             | -6.7987432E-09 | -4.0021363E-02 | -4.5547112E-09 |
| 27 Q37 | -4.1706576E-09 | -1.4226603E-02 | -7.1059970E-03 | -2.0430587E-09 |
| 28 Q38 | -2.1294155E-09 | -7.2636864E-03 | -3.6281137E-03 | -1.0431259E-09 |
| 29 P40 | 0.             | 0.             | 0.             | 0.             |
| 30 P41 | 0.             | 0.             | 7.4505806E-09  | 1.4901161E-08  |
| 31 P42 | -1.9380039E 00 | -1.8626451E-09 | 1.4901161E-08  | 0.             |
| 32 P43 | -3.4677552E 00 | -4.9173831E-07 | -8.6631720E-01 | -1.7337625E 00 |
| 33 P44 | -3.4660213E 00 | -4.9173831E-07 | -8.6588403E-01 | -1.7328956E 00 |
| 34 P45 | -5.4551695E 00 | -2.0727911E-01 | -1.9631998E 00 | -3.7217558E 00 |
| 35 P46 | -7.4444187E 00 | -4.1456825E-01 | -3.0605713E 00 | -5.7107171E 00 |
| 36 P47 | -9.3136339E 00 | -6.0934932E-01 | -4.0917259E 00 | -7.5796617E 00 |
| 37 P48 | -1.1182849E 01 | -8.0413038E-01 | -5.1228806E 00 | -9.4486065E 00 |
| 38 P49 | 0.             | 0.             | 0.             | 0.             |
| 39 P50 | 0.             | 0.             | 0.             | 0.             |
| 40 P51 | 3.5527137E-15  | 2.9802321E-08  | 1.4901161E-08  | 7.1054274E-15  |
| 41 P52 | -3.6143595E-07 | 5.9604645E-08  | 2.9802321E-08  | 7.1054274E-15  |
| 42 P53 | -6.4609033E-07 | -2.2038900E 00 | -1.1008136E 00 | -3.1649699E-07 |
| 43 P54 | -5.4406892E-07 | -1.8558831E 00 | -9.2698872E-01 | -2.6652028E-07 |
| 44 P55 | -7.9117118E-07 | -3.7635363E 00 | -1.8798365E 00 | -5.4047519E-07 |
| 45 P56 | -1.0382866E-06 | -5.6712913E 00 | -2.8327350E 00 | -8.1444470E-07 |
| 46 P57 | -9.8959097E-07 | -5.4053077E 00 | -2.6998798E 00 | -7.7624725E-07 |
| 47 P58 | -1.2108293E-06 | -7.1134714E 00 | -3.5530851E 00 | -1.0215538E-06 |
| 48 P59 | -1.4320677E-06 | -8.8216354E 00 | -4.062905E 00  | -1.2668604E-06 |
| 49 P60 | 0.             | 0.             | 0.             | 0.             |
| 50 P62 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | P108           | P109           | P110           | P111           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 0.             | 0.             | 0.             | 0.             |
| 52 P64 | 0.             | 0.             | 0.             | 0.             |
| 53 P67 | 2.1242474E-07  | 0.             | 0.             | 0.             |
| 54 P68 | 2.1238217E-07  | 0.             | 0.             | 0.             |
| 55 P69 | 7.2451209E-08  | 0.             | 0.             | 0.             |
| 56 P72 | 0.             | 1.9561321E-07  | 1.1514934E 00  | 2.3106804E-07  |
| 57 P73 | 0.             | 1.9557401E-07  | 1.1512626E 00  | 2.3102174E-07  |
| 58 P74 | 0.             | -2.5368547E-08 | 3.5066593E-01  | 7.0033409E-08  |
| 59 P77 | 2.2098985E-07  | 7.5382236E-01  | 3.7652417E-01  | 1.0825518E-07  |
| 60 P79 | 7.4695698E-08  | 2.479580E-01   | 1.2726708E-01  | 3.6590801E-08  |
| 61 P80 | 7.4680729E-08  | 2.5474474E-01  | 1.2724158E-01  | 3.6583468E-08  |
| 62 P81 | -9.6870828E-09 | -3.3043776E-02 | -1.6504923E-02 | -4.7453617E-09 |
| 63 P82 | 1.0541975E-01  | 1.5017577E-08  | 2.6336042E-02  | 5.2706376E-02  |
| 64 P83 | 0.             | 0.             | 0.             | 0.             |
| 65 P84 | 0.             | 0.             | 0.             | 0.             |
| 66 P93 | 0.             | 0.             | 0.             | 0.             |
| 67 P94 | 0.             | 0.             | 0.             | 0.             |
| 68 P95 | 0.             | 0.             | 0.             | 0.             |
| 69 P96 | 5.6132082E 00  | 4.3593796E-01  | 2.6649953E 00  | 4.8976882E 00  |
| 70 P97 | 2.2424279E-07  | 1.4868681E 00  | 7.4267103E-01  | 2.1352666E-07  |
| 71 Q19 | 0.             | 0.             | 0.             | 0.             |
| 72 Q20 | 0.             | 0.             | 0.             | 0.             |
| 73 Q21 | 0.             | 0.             | 0.             | 0.             |
| 74 Q22 | 0.             | 0.             | 0.             | 0.             |
| 75 Q23 | 0.             | 0.             | 0.             | 0.             |
| 76 Q24 | 0.             | 0.             | 0.             | 0.             |
| 77 Q26 | 0.             | 0.             | 0.             | 0.             |
| 78 Q28 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | P112           | P113           | P114           | P115           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 0.             | 0.             | 0.             | 0.             |
| 2 Q2   | -3.4924597E-10 | -3.7010617E-11 | 4.6566129E-10  | 1.8626451E-09  |
| 3 Q3   | 0.             | 6.3169692E-11  | 4.6566129E-10  | 4.6566129E-10  |
| 4 Q4   | 1.1641532E-10  | 6.3516969E-11  | -2.3283064E-10 | -4.6566129E-10 |
| 5 Q5   | 9.6686460E-03  | -2.8652709E-08 | -5.0507471E-02 | -1.0101010E-01 |
| 6 Q6   | 9.6686461E-03  | -2.8536295E-08 | -5.0507472E-02 | -1.0101010E-01 |
| 7 Q7   | 9.6686462E-03  | -2.8652711E-08 | -5.0507472E-02 | -1.0101010E-01 |
| 8 Q8   | 9.6686462E-03  | -2.8652711E-08 | -5.0507472E-02 | -1.0101010E-01 |
| 9 Q9   | -3.0768452E-02 | 9.1222281E-08  | 1.6072951E-01  | 3.2144361E-01  |
| 10 Q10 | 0.             | 0.             | 0.             | 0.             |
| 11 Q11 | -9.3132257E-10 | -9.3132257E-10 | -9.3132257E-10 | -1.1102230E-16 |
| 12 Q12 | -9.3132257E-10 | -9.3132257E-10 | -9.3132257E-10 | -1.1102230E-16 |
| 13 Q13 | -9.3132257E-10 | -4.6566129E-10 | -4.6566129E-10 | -5.5511150E-17 |
| 14 Q14 | 1.1295713E-01  | 1.0309279E-01  | 5.1550359E-02  | -5.5511150E-17 |
| 15 Q15 | 1.1295713E-01  | 1.0309280E-01  | 5.1550360E-02  | -1.1102230E-16 |
| 16 Q16 | 1.6308993E-01  | 1.4884758E-01  | 7.4429511E-02  | 2.0167134E-08  |
| 17 Q17 | 1.6308993E-01  | 1.4884759E-01  | 7.4429514E-02  | 2.0167134E-08  |
| 18 Q18 | 0.             | 0.             | 0.             | 0.             |
| 19 Q25 | 0.             | 0.             | 0.             | 0.             |
| 20 Q30 | -5.0152435E-02 | -4.5772714E-02 | -2.2888116E-02 | 7.0943317E-10  |
| 21 Q31 | 0.             | 0.             | 0.             | 0.             |
| 22 Q32 | 0.             | 0.             | 0.             | 0.             |
| 23 Q33 | 0.             | 0.             | 0.             | 0.             |
| 24 Q34 | 0.             | 0.             | 0.             | 0.             |
| 25 Q35 | 0.             | 0.             | 0.             | 0.             |
| 26 Q36 | 0.             | 0.             | 0.             | 0.             |
| 27 Q37 | 1.3064557E-02  | 9.3132256E-09  | 3.4845889E-02  | 5.5511150E-17  |
| 28 Q38 | 6.6703689E-03  | -5.5879354E-09 | -3.4844862E-02 | 1.3877788E-17  |
| 29 P40 | 0.             | 0.             | 0.             | 0.             |
| 30 P41 | -1.8626451E-09 | 2.3956304E-10  | 1.4901161E-08  | 1.4901161E-08  |
| 31 P42 | 1.8626451E-09  | -1.3048691E-09 | 1.4901161E-08  | 2.9802321E-08  |
| 32 P43 | 3.7252903E-09  | -2.4871696E-09 | 2.9802321E-08  | 2.9802321E-08  |
| 33 P44 | 0.             | -2.0463417E-09 | 1.4901161E-08  | 2.9802321E-08  |
| 34 P45 | 1.9034664E-01  | -5.6275466E-07 | -9.9434056E-01 | -1.9885859E 00 |
| 35 P46 | 3.8070294E-01  | -1.1272054E-06 | -1.9887317E 00 | -3.9772727E 00 |
| 36 P47 | 5.5957288E-01  | -1.6582701E-06 | -2.9231199E 00 | -5.8459595E 00 |
| 37 P48 | 7.3844285E-01  | -2.1093348E-06 | -3.8575082E 00 | -7.7146466E 00 |
| 38 P49 | 0.             | 0.             | 0.             | 0.             |
| 39 P50 | 0.             | 0.             | 0.             | 0.             |
| 40 P51 | 0.             | 0.             | 2.9802321E-08  | 3.5527137E-15  |
| 41 P52 | 0.             | 2.9802321E-08  | 2.9802321E-08  | 3.5527137E-15  |
| 42 P53 | 0.             | 5.9604645E-08  | 5.9604645E-08  | 3.5527137E-15  |
| 43 P54 | 0.             | 0.             | 2.9802321E-08  | 3.5527137E-15  |
| 44 P55 | -2.3331521E 00 | -2.1294023E 00 | -1.0647830E 00 | 7.1054274E-15  |
| 45 P56 | -4.6664286E 00 | -4.2589180E 00 | -2.1296227E 00 | 7.1054274E-15  |
| 46 P57 | -4.4475731E 00 | -4.0591748E 00 | -2.0297434E 00 | 7.1054274E-15  |
| 47 P58 | -6.5369167E 00 | -5.9660597E 00 | -2.9832592E 00 | -3.8621646E-07 |
| 48 P59 | -8.6262604E 00 | -7.8729450E 00 | -3.9367751E 00 | -7.7243296E-07 |
| 49 P60 | 0.             | 0.             | 0.             | 0.             |
| 50 P62 | 0.             | 0.             | 0.             | 0.             |



| GIRGIM | P112           | P113           | P114           | P115           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 0.             | 0.             | 0.             | 0.             |
| 52 P64 | 0.             | 0.             | 0.             | 0.             |
| 53 P67 | 0.             | 0.             | 0.             | 0.             |
| 54 P68 | 0.             | 0.             | 0.             | 0.             |
| 55 P69 | 0.             | 0.             | 0.             | 0.             |
| 56 P72 | 0.             | 0.             | 0.             | 0.             |
| 57 P73 | 0.             | 0.             | 0.             | 0.             |
| 58 P74 | 0.             | 0.             | 0.             | 0.             |
| 59 P77 | -6.9224886E-01 | -1.4901161E-08 | -1.4901161E-08 | -3.5527137E-15 |
| 60 P79 | -2.3398340E-01 | 2.0861626E-07  | 1.2222892E 00  | -8.8817842E-16 |
| 61 P80 | -2.3393651E-01 | 2.0861626E-07  | 1.2220442E 00  | -4.4408921E-16 |
| 62 P81 | 3.0344675E-02  | -2.6077032E-08 | 3.4148462E-01  | 1.1102230E-16  |
| 63 P82 | -1.1641532E-10 | 2.6806335E-11  | 9.9651514E-08  | 5.0000000E-01  |
| 64 P83 | 0.             | 0.             | 0.             | -2.4999999E-09 |
| 65 P84 | 0.             | 0.             | 0.             | 2.5000000E-09  |
| 66 P93 | 0.             | 0.             | 0.             | 0.             |
| 67 P94 | 0.             | 0.             | 0.             | 0.             |
| 68 P95 | 0.             | 0.             | 0.             | 0.             |
| 69 P96 | -4.0032727E-01 | 1.1862851E-06  | 2.0912461E 00  | 4.1822917E 00  |
| 70 P97 | 1.5819723E 00  | 1.4438215E 00  | 7.2196627E-01  | 1.9562119E-07  |
| 71 Q19 | 0.             | 0.             | 0.             | 0.             |
| 72 Q20 | 0.             | 0.             | 0.             | 0.             |
| 73 Q21 | 0.             | 0.             | 0.             | 0.             |
| 74 Q22 | 0.             | 0.             | 0.             | 0.             |
| 75 Q23 | 0.             | 0.             | 0.             | 0.             |
| 76 Q24 | 0.             | 0.             | 0.             | 0.             |
| 77 Q26 | 0.             | 0.             | 0.             | 0.             |
| 78 Q28 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | P116           | P117           | P118           | P119           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 0.             | 0.             | 0.             | 0.             |
| 2 Q2   | 3.4799719E-11  | 4.6566129E-10  | 3.9081210E-11  | 1.5549653E-10  |
| 3 Q3   | -1.2377543E-11 | 4.6566129E-10  | 6.7926110E-11  | 1.2613377E-10  |
| 4 Q4   | 7.1073813E-11  | -4.6566129E-10 | 8.1412044E-11  | 2.3204383E-11  |
| 5 Q5   | 1.0395240E-10  | 0.             | 2.1716121E-10  | 1.5895354E-10  |
| 6 Q6   | -1.9919484E-08 | -1.0101010E-01 | 2.7536859E-10  | 2.7536859E-10  |
| 7 Q7   | -4.0175750E-08 | -1.0101012E-01 | -9.4453106E-09 | -9.4453106E-09 |
| 8 Q8   | -4.0175750E-08 | -1.0101014E-01 | -9.4453106E-09 | -9.4453106E-09 |
| 9 Q9   | 7.8190526E-08  | 2.3858590E-01  | 1.4034197E-08  | 1.4034197E-08  |
| 10 Q10 | 0.             | 0.             | 0.             | 0.             |
| 11 Q11 | -9.3132257E-10 | -5.5511150E-17 | -9.3132257E-10 | -4.6566129E-10 |
| 12 Q12 | -9.3132257E-10 | -5.5511150E-17 | -9.3132257E-10 | -4.6566129E-10 |
| 13 Q13 | -4.6566129E-10 | -2.7755575E-17 | -4.6566129E-10 | -2.3283064E-10 |
| 14 Q14 | 0.             | -2.7755575E-17 | -4.6566129E-10 | -6.9849193E-10 |
| 15 Q15 | 1.0309278E-01  | -5.5511150E-17 | -6.9849193E-10 | 1.9324943E-08  |
| 16 Q16 | 1.2597078E-01  | 0.             | 6.9504644E-02  | 1.0309282E-01  |
| 17 Q17 | 1.2597080E-01  | 2.0618556E-08  | 6.9504644E-02  | 1.0309282E-01  |
| 18 Q18 | 0.             | 0.             | 0.             | 0.             |
| 19 Q25 | 0.             | 0.             | 0.             | 0.             |
| 20 Q30 | -2.2886964E-02 | 5.5511150E-17  | 3.3601312E-02  | -4.6566129E-09 |
| 21 Q31 | 0.             | 0.             | 0.             | 0.             |
| 22 Q32 | 0.             | 0.             | 0.             | 0.             |
| 23 Q33 | 0.             | 0.             | 0.             | 0.             |
| 24 Q34 | 0.             | 0.             | 0.             | 0.             |
| 25 Q35 | 0.             | 0.             | 0.             | 0.             |
| 26 Q36 | 0.             | 0.             | 0.             | 0.             |
| 27 Q37 | 2.3283064E-10  | 2.7755575E-17  | 2.3283064E-10  | 2.3283064E-10  |
| 28 Q38 | 1.1641532E-10  | 6.9388937E-18  | 1.1641532E-10  | 5.8207662E-11  |
| 29 P40 | 0.             | 0.             | 0.             | 0.             |
| 30 P41 | -5.9293724E-10 | 7.4505806E-09  | 4.6669735E-10  | 2.3293425E-09  |
| 31 P42 | 3.1390144E-09  | 1.4901161E-08  | -4.8730975E-10 | 3.2379805E-09  |
| 32 P43 | 4.2543461E-09  | 2.9802321E-08  | 5.9216968E-09  | 2.1964066E-09  |
| 33 P44 | 4.6321985E-09  | 0.             | 2.2642261E-09  | 5.9895164E-09  |
| 34 P45 | 2.4587621E-09  | -2.9802321E-08 | 6.2680544E-09  | 6.2680544E-09  |
| 35 P46 | -3.9088483E-07 | -1.9886868E 00 | 1.3994537E-08  | 1.3994537E-08  |
| 36 P47 | -1.1337288E-06 | -3.8573741E 00 | -1.6141310E-07 | -1.6141310E-07 |
| 37 P48 | -1.8765727E-06 | -5.7260618E 00 | -3.3682074E-07 | -3.3682074E-07 |
| 38 P49 | 0.             | 0.             | 0.             | 0.             |
| 39 P50 | 0.             | 0.             | 0.             | 0.             |
| 40 P51 | 2.9802321E-08  | 8.8817842E-16  | 1.4901161E-08  | 1.4901161E-08  |
| 41 P52 | 2.9802321E-08  | 1.7763568E-15  | 1.4901161E-08  | 1.4901161E-08  |
| 42 P53 | 2.9802321E-08  | 1.7763568E-15  | 2.9802321E-08  | 2.9802321E-08  |
| 43 P54 | 0.             | 1.7763568E-15  | 1.4901161E-08  | 1.4901161E-08  |
| 44 P55 | 2.9802321E-08  | 3.5527137E-15  | 2.9802321E-08  | 2.9802321E-08  |
| 45 P56 | -2.1295154E 00 | 3.5527137E-15  | 5.9604645E-08  | -3.8743019E-07 |
| 46 P57 | -2.0296412E 00 | 3.5527137E-15  | 2.9802321E-08  | -3.2762555E-07 |
| 47 P58 | -3.9366918E 00 | 3.5527137E-15  | -1.9074601E 00 | -1.9072174E 00 |
| 48 P59 | -5.8437428E 00 | -3.8144329E-07 | -3.8149204E 00 | -3.8144345E 00 |
| 49 P60 | 0.             | 0.             | 0.             | 0.             |
| 50 P62 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | P116           | P117           | P118           | P119           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 0.             | 0.             | 0.             | 0.             |
| 52 P64 | 0.             | 0.             | 0.             | 0.             |
| 53 P67 | 0.             | 0.             | 0.             | 0.             |
| 54 P68 | 0.             | 0.             | 0.             | 0.             |
| 55 P69 | 0.             | 0.             | 0.             | 0.             |
| 56 P72 | 0.             | 0.             | 0.             | 0.             |
| 57 P73 | 0.             | 0.             | 0.             | 0.             |
| 58 P74 | 0.             | 0.             | 0.             | 0.             |
| 59 P77 | -1.4901161E-08 | -8.8817842E-16 | -7.4505806E-09 | -1.4901161E-08 |
| 60 P79 | -3.7252903E-09 | -2.2204461E-16 | -3.7252903E-09 | 0.             |
| 61 P80 | -3.7252903E-09 | -2.2204461E-16 | -3.7252903E-09 | 0.             |
| 62 P81 | 9.3132257E-10  | 5.5511150E-17  | 4.6566129E-10  | 4.6566129E-10  |
| 63 P82 | 1.5602297E-10  | -9.3132257E-10 | -6.7516159E-11 | -6.7516159E-11 |
| 64 P83 | 0.             | 0.             | -1.0375000E-07 | -1.0375000E-07 |
| 65 P84 | 0.             | 0.             | -9.6249996E-08 | -9.6249996E-08 |
| 66 P93 | 0.             | 0.             | 0.             | 0.             |
| 67 P94 | 0.             | 0.             | 0.             | 0.             |
| 68 P95 | 0.             | 0.             | 0.             | 0.             |
| 69 P96 | 1.1727459E-06  | 3.3620009E 00  | 2.3208042E-07  | 2.3254609E-07  |
| 70 P97 | 1.2219168E 00  | 1.9999999E-07  | 6.7419503E-01  | 1.0000003E 00  |
| 71 Q19 | 0.             | 0.             | 0.             | 0.             |
| 72 Q20 | 0.             | 0.             | 0.             | 0.             |
| 73 Q21 | 0.             | 0.             | 0.             | 0.             |
| 74 Q22 | 0.             | 0.             | 0.             | 0.             |
| 75 Q23 | 0.             | 0.             | 0.             | 0.             |
| 76 Q24 | 0.             | 0.             | 0.             | 0.             |
| 77 Q26 | 0.             | 0.             | 0.             | 0.             |
| 78 Q28 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | P120           | P121           | P122           | P123           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 0.             | 0.             | 0.             | 0.             |
| 2 Q2   | 0.             | 7.2759576E-12  | 4.6566129E-10  | 3.2176372E-11  |
| 3 Q3   | 0.             | 3.6379788E-12  | 2.3283064E-10  | 1.4743845E-11  |
| 4 Q4   | 0.             | 0.             | 9.3132257E-10  | 1.8000240E-11  |
| 5 Q5   | -1.1641532E-10 | 7.2759576E-12  | 2.3283064E-10  | 6.9203559E-11  |
| 6 Q6   | -2.0023435E-08 | -2.0194420E-08 | 6.9849193E-10  | 6.9203254E-11  |
| 7 Q7   | -4.9873775E-02 | 1.2625961E-03  | -1.0101010E-01 | 4.0099396E-11  |
| 8 Q8   | -4.9873775E-02 | 1.2625961E-03  | -1.0101012E-01 | -2.0128855E-08 |
| 9 Q9   | 7.6888755E-02  | -1.9464858E-03 | 1.5572391E-01  | 1.1120584E-08  |
| 10 Q10 | 0.             | 0.             | 0.             | 0.             |
| 11 Q11 | -4.6566129E-10 | -1.4551915E-11 | -5.5511150E-17 | -4.6566129E-10 |
| 12 Q12 | -4.6566129E-10 | -1.0913936E-11 | -5.5511150E-17 | -4.6566129E-10 |
| 13 Q13 | -1.1641532E-10 | -7.2759576E-12 | -2.7755575E-17 | -1.1641532E-10 |
| 14 Q14 | -2.3283064E-10 | -3.6379788E-12 | -2.7755575E-17 | 0.             |
| 15 Q15 | 2.0139851E-08  | 2.0598236E-08  | -5.5511150E-17 | -2.3283064E-10 |
| 16 Q16 | 5.6823130E-02  | 1.4030762E-03  | 0.             | -2.3283064E-10 |
| 17 Q17 | 5.6823130E-02  | 1.4030762E-03  | 2.0618556E-08  | 1.0309278E-01  |
| 18 Q18 | 0.             | 0.             | 0.             | -4.1666666E-09 |
| 19 Q25 | 0.             | 0.             | 0.             | 0.             |
| 20 Q30 | -4.6342037E-03 | -1.1443017E-04 | 5.5511150E-17  | 4.6566129E-10  |
| 21 Q31 | 0.             | 0.             | 0.             | 0.             |
| 22 Q32 | 0.             | 0.             | 0.             | 0.             |
| 23 Q33 | 0.             | 0.             | 0.             | 0.             |
| 24 Q34 | 0.             | 0.             | 0.             | 0.             |
| 25 Q35 | 0.             | 0.             | 0.             | 0.             |
| 26 Q36 | 0.             | 0.             | 0.             | 0.             |
| 27 Q37 | 1.1641532E-10  | 3.6379788E-12  | 2.7755575E-17  | 1.1641532E-10  |
| 28 Q38 | 0.             | 9.0949470E-13  | 6.9388937E-18  | 2.9103830E-11  |
| 29 P40 | 0.             | 0.             | 0.             | 0.             |
| 30 P41 | 0.             | 0.             | 7.4505806E-09  | 9.4076656E-10  |
| 31 P42 | 0.             | 0.             | 1.4901161E-08  | -1.9820412E-10 |
| 32 P43 | -7.4505806E-09 | 2.3283064E-10  | 1.4901161E-08  | 1.2616219E-09  |
| 33 P44 | 0.             | 2.3283064E-10  | 1.4901161E-08  | -5.2714809E-10 |
| 34 P45 | 0.             | 0.             | 2.9802321E-08  | 7.0758154E-10  |
| 35 P46 | -3.8743019E-07 | -3.9767473E-07 | 5.9604645E-08  | 3.8020858E-09  |
| 36 P47 | -9.2266524E-01 | 2.3357630E-02  | -1.8686868E 00 | 5.1842120E-09  |
| 37 P48 | -1.8453301E 00 | 4.6715658E-02  | -3.7313741E 00 | -3.6689402E-07 |
| 38 P49 | 0.             | 0.             | -9.9999998E-08 | -9.9999998E-08 |
| 39 P50 | 0.             | 0.             | 0.             | 0.             |
| 40 P51 | 7.4505806E-09  | 2.3283064E-10  | 8.8817842E-16  | 7.4505806E-09  |
| 41 P52 | 7.4505806E-09  | 2.3283064E-10  | 1.7763568E-15  | 7.4505806E-09  |
| 42 P53 | 1.4901161E-08  | 4.6566129E-10  | 1.7763568E-15  | 1.4901161E-08  |
| 43 P54 | 0.             | 4.6566129E-10  | 1.7763568E-15  | 7.4505806E-09  |
| 44 P55 | 0.             | 4.6566129E-10  | 3.5527137E-15  | 1.4901161E-08  |
| 45 P56 | -3.8743019E-07 | -4.2468308E-07 | 3.5527137E-15  | 1.4901161E-08  |
| 46 P57 | -3.7252902E-07 | -4.0512531E-07 | 3.5527137E-15  | 1.4901161E-08  |
| 47 P58 | -9.6549549E-01 | -2.3840356E-02 | 3.5527137E-15  | 1.4901161E-08  |
| 48 P59 | -1.9309907E 00 | -4.7680306E-02 | -3.8144329E-07 | -1.9072165E 00 |
| 49 P60 | 0.             | 0.             | 0.             | -9.9999998E-08 |
| 50 P62 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | P120           | P121           | P122           | P123           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 0.             | 0.             | 0.             | 0.             |
| 52 P64 | 0.             | 0.             | 0.             | 0.             |
| 53 P67 | 0.             | 0.             | 0.             | 0.             |
| 54 P68 | 0.             | 0.             | 0.             | 0.             |
| 55 P69 | 0.             | 0.             | 0.             | 0.             |
| 56 P72 | 0.             | 0.             | 0.             | 0.             |
| 57 P73 | 0.             | 0.             | 0.             | 0.             |
| 58 P74 | 0.             | 0.             | 0.             | 0.             |
| 59 P77 | -3.7252903E-09 | -1.1641532E-10 | -8.8817842E-16 | -7.4505806E-09 |
| 60 P79 | -1.8626451E-09 | -2.9103830E-11 | -2.2204461E-16 | -1.8626451E-09 |
| 61 P80 | 0.             | -5.8207662E-11 | -2.2204461E-16 | 0.             |
| 62 P81 | 4.6566129E-10  | 1.0913936E-11  | 5.5511150E-17  | 2.3283064E-10  |
| 63 P82 | -2.3283064E-10 | 0.             | -4.6566129E-10 | 9.6094244E-12  |
| 64 P83 | -5.0624998E-01 | -1.2500101E-02 | 0.             | 0.             |
| 65 P84 | -4.9374998E-01 | 1.2499901E-02  | 0.             | 0.             |
| 66 P93 | 0.             | 0.             | 0.             | 0.             |
| 67 P94 | 0.             | 0.             | 0.             | 0.             |
| 68 P95 | 0.             | 0.             | 0.             | 0.             |
| 69 P96 | 1.2549490E 00  | -3.1769911E-02 | 2.5416669E 00  | 3.0921341E-07  |
| 70 P97 | 5.5118433E-01  | 1.3609838E-02  | 1.9999999E-07  | 1.0000000E 00  |
| 71 Q19 | 0.             | 0.             | 0.             | 0.             |
| 72 Q20 | 0.             | 0.             | 0.             | 0.             |
| 73 Q21 | 0.             | 0.             | 0.             | 0.             |
| 74 Q22 | 0.             | 0.             | 0.             | 0.             |
| 75 Q23 | 0.             | 0.             | 0.             | 0.             |
| 76 Q24 | 0.             | 0.             | 0.             | 0.             |
| 77 Q26 | 0.             | 0.             | 0.             | 0.             |
| 78 Q28 | 0.             | 0.             | 0.             | 0.             |

| GIRGIM | P124           | P125 | P126 |
|--------|----------------|------|------|
| 1 Q1   | 0.             | 0.   | 0.   |
| 2 Q2   | 0.             | 0.   | 0.   |
| 3 Q3   | 0.             | 0.   | 0.   |
| 4 Q4   | 2.3283064E-10  | 0.   | 0.   |
| 5 Q5   | 4.6566129E-10  | 0.   | 0.   |
| 6 Q6   | 6.9849193E-10  | 0.   | 0.   |
| 7 Q7   | 5.8207661E-10  | 0.   | 0.   |
| 8 Q8   | -1.0101010E-01 | 0.   | 0.   |
| 9 Q9   | 7.7861941E-02  | 0.   | 0.   |
| 10 Q10 | 0.             | 0.   | 0.   |
| 11 Q11 | 0.             | 0.   | 0.   |
| 12 Q12 | 0.             | 0.   | 0.   |
| 13 Q13 | 0.             | 0.   | 0.   |
| 14 Q14 | 0.             | 0.   | 0.   |
| 15 Q15 | 0.             | 0.   | 0.   |
| 16 Q16 | 0.             | 0.   | 0.   |
| 17 Q17 | 0.             | 0.   | 0.   |
| 18 Q18 | -4.1666666E-09 | 0.   | 0.   |
| 19 Q25 | 0.             | 0.   | 0.   |
| 20 Q30 | 0.             | 0.   | 0.   |
| 21 Q31 | 0.             | 0.   | 0.   |
| 22 Q32 | 0.             | 0.   | 0.   |
| 23 Q33 | 0.             | 0.   | 0.   |
| 24 Q34 | 0.             | 0.   | 0.   |
| 25 Q35 | 0.             | 0.   | 0.   |
| 26 Q36 | 0.             | 0.   | 0.   |
| 27 Q37 | 0.             | 0.   | 0.   |
| 28 Q38 | 0.             | 0.   | 0.   |
| 29 P40 | 9.9999998E-08  | 0.   | 0.   |
| 30 P41 | 9.6857547E-08  | 0.   | 0.   |
| 31 P42 | 9.6857547E-08  | 0.   | 0.   |
| 32 P43 | 9.6857547E-08  | 0.   | 0.   |
| 33 P44 | 9.6857547E-08  | 0.   | 0.   |
| 34 P45 | 1.1920929E-07  | 0.   | 0.   |
| 35 P46 | 1.3411045E-07  | 0.   | 0.   |
| 36 P47 | 1.4901161E-07  | 0.   | 0.   |
| 37 P48 | -1.8686867E-08 | 0.   | 0.   |
| 38 P49 | -9.9999998E-08 | 0.   | 0.   |
| 39 P50 | 0.             | 0.   | 0.   |
| 40 P51 | 0.             | 0.   | 0.   |
| 41 P52 | 0.             | 0.   | 0.   |
| 42 P53 | 0.             | 0.   | 0.   |
| 43 P54 | 0.             | 0.   | 0.   |
| 44 P55 | 0.             | 0.   | 0.   |
| 45 P56 | 0.             | 0.   | 0.   |
| 46 P57 | 0.             | 0.   | 0.   |
| 47 P58 | 0.             | 0.   | 0.   |
| 48 P59 | 0.             | 0.   | 0.   |
| 49 P60 | -9.9999998E-08 | 0.   | 0.   |
| 50 P61 | 0.             | 0.   | 0.   |

| GIRGIM | P124           | P125 | P126 |
|--------|----------------|------|------|
| 51 P63 | 0.             | 0.   | 0.   |
| 52 P64 | 0.             | 0.   | 0.   |
| 53 P67 | 0.             | 0.   | 0.   |
| 54 P68 | 0.             | 0.   | 0.   |
| 55 P69 | 0.             | 0.   | 0.   |
| 56 P72 | 0.             | 0.   | 0.   |
| 57 P73 | 0.             | 0.   | 0.   |
| 58 P74 | 0.             | 0.   | 0.   |
| 59 P77 | 0.             | 0.   | 0.   |
| 60 P79 | 0.             | 0.   | 0.   |
| 61 P80 | 0.             | 0.   | 0.   |
| 62 P81 | 0.             | 0.   | 0.   |
| 63 P82 | -3.0267984E-09 | 0.   | 0.   |
| 64 P83 | 0.             | 0.   | 0.   |
| 65 P84 | 0.             | 0.   | 0.   |
| 66 P93 | 0.             | 0.   | 0.   |
| 67 P94 | 0.             | 0.   | 0.   |
| 68 P95 | 0.             | 0.   | 0.   |
| 69 P96 | 1.7708332E 00  | 0.   | 0.   |
| 70 P97 | 4.0416664E-08  | 0.   | 0.   |
| 71 Q19 | 0.             | 0.   | 0.   |
| 72 Q20 | 0.             | 0.   | 0.   |
| 73 Q21 | 0.             | 0.   | 0.   |
| 74 Q22 | 0.             | 0.   | 0.   |
| 75 Q23 | 0.             | 0.   | 0.   |
| 76 Q24 | 0.             | 0.   | 0.   |
| 77 Q26 | 0.             | 0.   | 0.   |
| 78 Q28 | 0.             | 0.   | 0.   |

## TRIPLE PRODUCT

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| TRIPLE | Q19            | Q20            | Q21            | Q22            |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 1.3044532E-01  | -7.4858914E-02 | 2.9344736E-02  | -1.3561285E-01 |
| Q20    | -7.4858914E-02 | 6.7473099E-02  | -3.3388317E-02 | 7.5407641E-02  |
| Q21    | 2.9344736E-02  | -3.3388317E-02 | 7.7943723E-02  | 1.4391265E-02  |
| Q22    | -1.3561285E-01 | 7.5407641E-02  | 1.4391265E-02  | 2.2011316E-01  |
| Q23    | 1.7175988E-02  | -2.0925522E-02 | 3.6197526E-02  | -2.1416066E-03 |
| Q24    | -1.1576300E-01 | 5.7260493E-02  | 9.7457569E-03  | 1.7707807E-01  |
| Q26    | -9.8969731E-02 | 4.4593349E-02  | 1.0432380E-02  | 1.4955049E-01  |
| Q28    | -1.3315179E-02 | 3.1133629E-03  | 2.9494980E-03  | 1.8723110E-02  |
| P100   | 4.5211846E-03  | -1.5250926E-03 | -7.9259972E-03 | -1.5252012E-02 |
| P101   | -2.8439227E-03 | 1.8569428E-03  | -2.5488641E-03 | 7.6960112E-04  |
| P102   | -9.6588200E-03 | 4.9863234E-03  | 2.4265707E-03  | 1.5594321E-02  |
| P103   | 5.7054020E-03  | -1.8541552E-03 | -4.8973532E-03 | -1.2224980E-02 |
| P104   | -1.1628876E-03 | 7.1545110E-04  | -1.4779809E-03 | 1.9691432E-04  |
| P105   | -7.7774711E-03 | 3.1788768E-03  | 1.7763677E-03  | 1.2234103E-02  |
| P106   | 5.4397343E-03  | -1.9586822E-03 | -2.1277626E-03 | -9.2351569E-03 |
| P107   | -3.3772116E-04 | 1.0507308E-04  | -4.9793958E-04 | -4.7401236E-05 |
| P108   | -6.0186457E-03 | 2.1342945E-03  | 1.1203774E-03  | 8.9657934E-03  |
| P109   | 4.4681844E-03  | -1.6644264E-03 | -7.8939179E-04 | -6.7210018E-03 |
| P110   | -3.4535133E-05 | -7.6350458E-05 | -6.6953974E-05 | -1.1990590E-04 |
| P111   | -4.4794072E-03 | 1.4547876E-03  | 7.1131275E-04  | 6.4222945E-03  |
| P112   | 3.7929475E-03  | -1.1614377E-03 | -6.5547016E-04 | -5.4378856E-03 |
| P113   | 3.2571000E-03  | -1.0351708E-03 | -5.3031196E-04 | -4.6774827E-03 |
| P114   | 1.7718407E-04  | -1.5384301E-04 | 3.4564610E-05  | -2.9933696E-04 |
| P115   | -3.1147093E-03 | 9.0607904E-04  | 4.9612445E-04  | 4.3617528E-03  |
| P116   | 1.7982201E-03  | -5.0588686E-04 | -2.8482382E-04 | -2.5094719E-03 |
| P117   | -1.8901757E-03 | 4.9515038E-04  | 2.9462578E-04  | 2.5861451E-03  |
| P118   | 7.0164370E-04  | -1.6883397E-04 | -1.0767203E-04 | -9.4742857E-05 |
| P119   | 8.0581948E-04  | -2.0295027E-04 | -1.2475577E-04 | -1.0981535E-03 |
| P120   | -6.0872826E-05 | 8.5145631E-06  | 8.5504891E-06  | 7.2574956E-05  |
| P121   | 2.2660024E-05  | -5.5888343E-06 | -3.4926613E-06 | -3.0678183E-05 |
| P122   | -9.7860483E-04 | 2.3486229E-04  | 1.5000339E-04  | 1.3150423E-03  |
| P123   | 2.6953706E-04  | -6.2491927E-05 | -4.1075432E-05 | -3.6132630E-04 |
| P124   | -3.7431309E-04 | 8.4174479E-05  | 5.6708568E-05  | 4.9670904E-04  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |



| TRIPLE | Q23            | Q24            | Q26            | Q28            |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 1.7175988E-02  | -1.1576300E-01 | -9.8969731E-02 | -1.3315179E-02 |
| Q20    | -2.0925522E-02 | 5.7260493E-02  | 4.4593349E-02  | 3.1133629E-03  |
| Q21    | 3.6197526E-02  | 9.7457569E-03  | 1.0432380E-02  | 2.9494980E-03  |
| Q22    | -2.1416066E-03 | 1.7707807E-01  | 1.4955049E-01  | 1.8723110E-02  |
| Q23    | 3.8077955E-02  | -1.4404847E-03 | -1.8227326E-03 | 1.4064172E-03  |
| Q24    | -1.4404847E-03 | 1.6925430E-01  | 1.3795216E-01  | 1.7299262E-02  |
| Q26    | -1.8227326E-03 | 1.3795216E-01  | 1.3851784E-01  | 1.6671257E-02  |
| Q28    | 1.4064172E-03  | 1.7299262E-02  | 1.6671257E-02  | 1.2425509E-02  |
| P100   | -3.4016404E-03 | -1.3019305E-02 | -1.1505507E-02 | -1.4566331E-03 |
| P101   | -1.1869817E-03 | 4.8537366E-04  | 1.8386383E-04  | 2.5546596E-04  |
| P102   | 8.6223110E-04  | 1.2981187E-02  | 1.0999981E-02  | 1.8396627E-03  |
| P103   | -2.3135259E-03 | -1.0755453E-02 | -9.6449873E-03 | -1.3756857E-03 |
| P104   | -8.0110414E-04 | 1.2795002E-04  | -4.9208360E-05 | 1.3433389E-04  |
| P105   | 6.5659615E-04  | 1.0633864E-02  | 9.2132943E-03  | 1.5923008E-03  |
| P106   | -1.2254125E-03 | -8.4917736E-03 | -7.7846327E-03 | -1.2947730E-03 |
| P107   | -3.6370906E-04 | -4.8782997E-05 | -1.1413787E-04 | 3.6246179E-05  |
| P108   | 4.5092878E-04  | 8.2862114E-03  | 7.4263077E-03  | 1.3443869E-03  |
| P109   | -2.4968756E-04 | -6.2282596E-03 | -5.9236890E-03 | -1.2137723E-03 |
| P110   | -5.8084825E-05 | -8.7564483E-05 | -1.4296161E-04 | -5.7927404E-05 |
| P111   | 2.2584202E-04  | 5.9565922E-03  | 5.6388261E-03  | 1.0973859E-03  |
| P112   | -2.1507648E-04 | -5.0372365E-03 | -4.8052353E-03 | -1.3706294E-03 |
| P113   | -1.5253778E-04 | -4.3349533E-03 | -4.1269952E-03 | -1.1327354E-03 |
| P114   | 6.3651788E-05  | -2.8097050E-04 | -2.2189722E-04 | -8.5846331E-05 |
| P115   | 1.6429726E-04  | 4.0443110E-03  | 3.8228728E-03  | 8.4992355E-04  |
| P116   | -8.0248332E-05 | -2.3253078E-03 | -2.2128017E-03 | -6.7757166E-04 |
| P117   | 9.7134378E-05  | 2.3977239E-03  | 2.2643616E-03  | 5.5957456E-04  |
| P118   | -2.9585790E-05 | -8.7772133E-04 | -8.3482630E-04 | -1.4409096E-04 |
| P119   | -3.4525471E-05 | -1.0174149E-03 | -9.6783307E-04 | -2.8339357E-04 |
| P120   | 6.1721640E-06  | 6.7622622E-05  | 5.9751778E-05  | -1.1140685E-05 |
| P121   | -1.0643831E-06 | -2.8432712E-05 | -2.6932103E-05 | -7.8532599E-06 |
| P122   | 4.9279855E-05  | 1.2191484E-03  | 1.1505026E-03  | 3.0691527E-04  |
| P123   | -1.1222405E-05 | -3.3472644E-04 | -3.1833140E-04 | -1.0335599E-04 |
| P124   | 1.8583491E-05  | 4.6046648E-04  | 4.3431512E-04  | 1.2192461E-04  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |

| TRIPLE | P100           | P101           | P102           | P103           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 4.5211846E-03  | -2.8439227E-03 | -9.6588200E-03 | 5.7054020E-03  |
| Q20    | -1.5250926E-03 | 1.8569428E-03  | 4.9863234E-03  | -1.8541552E-03 |
| Q21    | -7.9259972E-03 | -2.5488641E-03 | 2.4265707E-03  | -4.8973532E-03 |
| Q22    | -1.5252012E-02 | 7.6960112E-04  | 1.5594321E-02  | -1.2224980E-02 |
| Q23    | -3.4016404E-03 | -1.1869817E-03 | 8.6223110E-04  | -2.3135259E-03 |
| Q24    | -1.3019305E-02 | 4.8537366E-04  | 1.2981187E-02  | -1.0755453E-02 |
| Q26    | -1.1505507E-02 | 1.8386383E-04  | 1.0999981E-02  | -9.6449873E-03 |
| Q28    | -1.4566331E-03 | 2.5546596E-04  | 1.8396627E-03  | -1.3756857E-03 |
| P100   | 3.5568880E-03  | 1.9057161E-03  | 3.7789492E-04  | 2.5466697E-03  |
| P101   | 1.9057161E-03  | 1.8089335E-03  | 1.7193811E-03  | 1.3711382E-03  |
| P102   | 3.7789492E-04  | 1.7193811E-03  | 2.9606517E-03  | 2.8342467E-04  |
| P103   | 2.5466697E-03  | 1.3711382E-03  | 2.8342467E-04  | 1.9933969E-03  |
| P104   | 1.4152711E-03  | 1.3572234E-03  | 1.3035121E-03  | 1.1023585E-03  |
| P105   | 3.2706296E-04  | 1.3475424E-03  | 2.2917871E-03  | 2.4530097E-04  |
| P106   | 1.7546373E-03  | 9.4142309E-04  | 1.8895998E-04  | 1.4480368E-03  |
| P107   | 1.0074336E-03  | 9.8624704E-04  | 9.6664318E-04  | 8.2093275E-04  |
| P108   | 2.7624334E-04  | 1.0336244E-03  | 1.7344254E-03  | 2.0718577E-04  |
| P109   | 1.1732465E-03  | 6.1293426E-04  | 9.4480109E-05  | 1.0040934E-03  |
| P110   | 6.9865056E-04  | 6.9272153E-04  | 6.8723541E-04  | 5.8600483E-04  |
| P111   | 2.2540582E-04  | 7.7364166E-04  | 1.2809215E-03  | 1.6905710E-04  |
| P112   | 8.1955886E-04  | 3.4882085E-04  | -8.6750698E-05 | 7.2113221E-04  |
| P113   | 7.7226668E-04  | 3.7115324E-04  | 4.9469384E-09  | 6.8001685E-04  |
| P114   | 4.8487208E-04  | 4.6842200E-04  | 4.5320078E-04  | 4.1406757E-04  |
| P115   | 1.7457627E-04  | 5.5466196E-04  | 9.0635335E-04  | 1.3093434E-04  |
| P116   | 4.2311574E-04  | 2.0335047E-04  | 2.7387632E-09  | 3.7947395E-04  |
| P117   | 1.1493786E-04  | 3.4419604E-04  | 5.5632749E-04  | 8.6204823E-05  |
| P118   | 1.6368170E-04  | 7.8665806E-05  | 1.0205824E-09  | 1.4982497E-04  |
| P119   | 1.8843186E-04  | 9.0560790E-05  | 1.1705968E-09  | 1.7151273E-04  |
| P120   | 1.2993368E-04  | 1.3694758E-04  | 1.4343751E-04  | 1.1316476E-04  |
| P121   | 1.6518002E-06  | -1.0921718E-06 | -3.6311555E-06 | 1.6268582E-06  |
| P122   | 6.3041075E-05  | 1.8118596E-04  | 2.9050482E-04  | 4.7281595E-05  |
| P123   | 6.2761431E-05  | 3.0163296E-05  | 4.0239032E-10  | 5.7701119E-05  |
| P124   | 2.5043575E-05  | 7.0088913E-05  | 1.1176914E-04  | 1.8782996E-05  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |

| TRIPLE | P104           | P105           | P106           | P107           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | -1.1628896E-03 | -7.7774711E-03 | 5.4397343E-03  | -3.3772116E-04 |
| Q20    | 7.1545110E-04  | 3.1788768E-03  | -1.9586822E-03 | 1.0507308E-04  |
| Q21    | -1.4779809E-03 | 1.7763677E-03  | -2.1277626E-03 | -4.9793958E-04 |
| Q22    | 1.9691432E-04  | 1.2234103E-02  | -9.2351569E-03 | -4.7401236E-05 |
| Q23    | -8.0110414E-04 | 6.5659615E-04  | -1.2254125E-03 | -3.6370906E-04 |
| Q24    | 1.2795002E-04  | 1.0633864E-02  | -8.4917736E-03 | -4.8782997E-05 |
| Q26    | -4.9208360E-05 | 9.2132943E-03  | -7.7846327E-03 | -1.1413787E-04 |
| Q28    | 1.3433389E-04  | 1.5923008E-03  | -1.2947730E-03 | 3.6246179E-05  |
| P100   | 1.4152711E-03  | 3.2706296E-04  | 1.7546373E-03  | 1.0074336E-03  |
| P101   | 1.3572234E-03  | 1.3475424E-03  | 9.4142309E-04  | 9.8624704E-04  |
| P102   | 1.3035121E-03  | 2.2917871E-03  | 1.8891998E-04  | 9.6664318E-04  |
| P103   | 1.1023585E-03  | 2.4530097E-04  | 1.4480368E-03  | 8.2093275E-04  |
| P104   | 1.0968003E-03  | 1.0743069E-03  | 7.9332857E-04  | 8.1772873E-04  |
| P105   | 1.0743069E-03  | 1.8775007E-03  | 1.6354251E-04  | 8.1689574E-04  |
| P106   | 7.9332857E-04  | 1.6354251E-04  | 1.1414603E-03  | 6.3444526E-04  |
| P107   | 8.1772873E-04  | 8.1689574E-04  | 6.3444526E-04  | 6.6083727E-04  |
| P108   | 8.4446177E-04  | 1.4619469E-03  | 1.3813107E-04  | 6.6713335E-04  |
| P109   | 5.3403412E-04  | 8.1769830E-05  | 8.3495971E-04  | 4.4798926E-04  |
| P110   | 5.8667442E-04  | 5.8894201E-04  | 4.7336991E-04  | 4.8126239E-04  |
| P111   | 6.4027975E-04  | 1.0969122E-03  | 1.1271063E-04  | 5.1533085E-04  |
| P112   | 3.1750653E-04  | -7.5090032E-05 | 6.3072116E-04  | 2.8021645E-04  |
| P113   | 3.3353322E-04  | 2.9794201E-10  | 5.8778147E-04  | 2.9089321E-04  |
| P114   | 4.0240476E-04  | 3.9225835E-04  | 3.4327125E-04  | 3.3666928E-04  |
| P115   | 4.0240476E-04  | 7.8448005E-04  | 8.7294120E-05  | 3.7675449E-04  |
| P116   | 4.0240476E-04  | 1.8870158E-10  | 3.3584069E-04  | 1.6620766E-04  |
| P117   | 4.0240476E-04  | 4.8618731E-04  | 5.7472880E-05  | 2.3787914E-04  |
| P118   | 7.3485820E-05  | 3.8650356E-11  | 1.3597182E-04  | 6.7292477E-05  |
| P119   | 8.4123185E-05  | 4.0892974E-11  | 1.5459763E-04  | 7.6510395E-05  |
| P120   | 1.1965359E-04  | 1.2624779E-04  | 9.6398233E-05  | 1.0260701E-04  |
| P121   | -8.2601839E-07 | -3.1960202E-06 | 1.6019609E-06  | -5.9699605E-07 |
| P122   | 1.5311204E-04  | 2.5569144E-04  | 3.1522709E-05  | 1.2678936E-04  |
| P123   | 2.8301123E-05  | 2.4614556E-11  | 5.2642202E-05  | 2.6052640E-05  |
| P124   | 5.9439226E-05  | 9.8848232E-05  | 1.2522650E-05  | 4.9452788E-05  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |

| TRIPLE | P108           | P109           | P110           | P111           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | -6.0186457E-03 | 4.4681844E-03  | -3.4535133E-05 | -4.4794072E-03 |
| Q20    | 2.1342945E-03  | -1.6644264E-03 | -7.6350358E-05 | 1.4547876E-03  |
| Q21    | 1.1203774E-03  | -7.8939179E-04 | -6.6953974E-05 | 7.1131275E-04  |
| Q22    | 8.9657934E-03  | -6.7210018E-03 | -1.1990590E-04 | 6.4222945E-03  |
| Q23    | 4.5092878E-04  | -2.4968756E-04 | -5.8034825E-05 | 2.2584202E-04  |
| Q24    | 8.2862114E-03  | -6.2282596E-03 | -8.7564483E-05 | 5.9565922E-03  |
| Q26    | 7.4263077E-03  | -5.9236890E-03 | -1.4296161E-04 | 5.6388261E-03  |
| Q28    | 1.3448869E-03  | -1.2137723E-03 | -5.7227404E-05 | 1.0973859E-03  |
| P100   | 2.7624334E-04  | 1.1732465E-03  | 6.9865056E-04  | 2.2540582E-04  |
| P101   | 1.0336244E-03  | 6.1293426E-04  | 6.9272153E-04  | 7.7364166E-04  |
| P102   | 1.7344254E-03  | 9.4480109E-05  | 6.8723541E-04  | 1.2809215E-03  |
| P103   | 2.0718577E-04  | 1.0040934E-03  | 5.8600483E-04  | 1.6905710E-04  |
| P104   | 8.4446177E-04  | 5.3403412E-04  | 5.8667442E-04  | 6.4027975E-04  |
| P105   | 1.4619469E-03  | 8.1769830E-05  | 5.8894201E-04  | 1.0969122E-03  |
| P106   | 1.3813107E-04  | 8.3495971E-04  | 4.7336991E-04  | 1.1271063E-04  |
| P107   | 6.6713335E-04  | 4.4798926E-04  | 4.8126239E-04  | 5.1533085E-04  |
| P108   | 1.1894328E-03  | 6.9064350E-05  | 4.9063714E-04  | 9.1287508E-04  |
| P109   | 6.9064350E-05  | 6.6576417E-04  | 3.6069919E-04  | 5.6354353E-05  |
| P110   | 4.9063714E-04  | 3.6069919E-04  | 3.8446146E-04  | 3.9230019E-04  |
| P111   | 9.1287508E-04  | 5.6354353E-05  | 3.9230019E-04  | 7.2877826E-04  |
| P112   | -6.3422421E-05 | 5.3626484E-04  | 79865E-04      | -5.1750721E-05 |
| P113   | 2.7413464E-10  | 4.9550372E-04  | 2.4749765E-04  | 2.2452739E-10  |
| P114   | 3.3130916E-04  | 2.7244942E-04  | 2.7116587E-04  | 2.7033798E-04  |
| P115   | 6.6258650E-04  | 4.3646299E-05  | 2.9194977E-04  | 5.4064997E-04  |
| P116   | 1.7519175E-10  | 2.9218361E-04  | 1.4594191E-04  | 1.4722696E-10  |
| P117   | 4.1603433E-04  | 2.8735936E-05  | 1.8716795E-04  | 3.4585458E-04  |
| P118   | 3.9056279E-11  | 1.2210919E-04  | 6.0991936E-05  | 3.3735106E-11  |
| P119   | 4.1723143E-11  | 1.3767170E-04  | 6.8765207E-05  | 3.5956980E-11  |
| P120   | 1.0905529E-04  | 7.9624688E-05  | 8.5669485E-05  | 9.1855813E-05  |
| P121   | -2.7607850E-06 | 1.5769578E-06  | -3.7426023E-07 | -2.3253731E-06 |
| P122   | 2.2087122E-04  | 1.5761080E-05  | 1.0083034E-04  | 1.8603687E-04  |
| P123   | 2.3589495E-11  | 4.7579629E-05  | 2.3765403E-05  | 2.0341874E-11  |
| P124   | 8.5924662E-05  | 6.2612144E-06  | 3.9601443E-05  | 7.2995613E-05  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |

| TRIPLE | P112           | P113           | P114           | P115           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 3.7929475E-03  | 3.2571000E-03  | 1.7718407E-04  | -3.1147093E-03 |
| Q20    | -1.1614377E-03 | -1.0351703E-03 | -1.5384301E-04 | 9.0607904E-04  |
| Q21    | -6.5547016E-04 | -5.3031196E-04 | 3.4564610E-05  | 4.9612445E-04  |
| Q22    | -5.4378856E-03 | -4.6774827E-03 | -2.9933626E-04 | 4.3617528E-03  |
| Q23    | -2.1507648E-04 | -1.5253778E-04 | 6.3651788E-05  | 1.6429726E-04  |
| Q24    | -5.0372365E-03 | -4.3349533E-03 | -2.8097050E-04 | 4.0443110E-03  |
| Q26    | -4.8052353E-03 | -4.1269952E-03 | -2.2189722E-04 | 3.8228728E-03  |
| Q28    | -1.3706294E-03 | -1.1327354E-03 | -8.5846331E-05 | 8.4992355E-04  |
| P100   | 8.1955806E-04  | 7.7226668E-04  | 4.8487208E-04  | 1.7457627E-04  |
| P101   | 3.4882085E-04  | 3.7115324E-04  | 4.6842200E-04  | 5.5466196E-04  |
| P102   | -8.6750698E-05 | 4.9469384E-09  | 4.5320078E-04  | 9.0635335E-04  |
| P103   | 7.2513221E-04  | 6.8001685E-04  | 4.1406757E-04  | 1.3093434E-04  |
| P104   | 3.1750653E-04  | 3.2353322E-04  | 4.0240476E-04  | 4.6282896E-04  |
| P105   | -7.5090032E-05 | 2.9794201E-10  | 3.9225885E-04  | 7.8448005E-04  |
| P106   | 6.5072116E-04  | 5.8778147E-04  | 3.4327125E-04  | 8.7294120E-05  |
| P107   | 2.8021645E-04  | 2.9089321E-04  | 3.3666928E-04  | 3.7675449E-04  |
| P108   | -6.3422421E-05 | 2.7413464E-10  | 3.3130916E-04  | 6.6258650E-04  |
| P109   | 5.3626484E-04  | 4.9550372E-04  | 2.7244942E-04  | 4.3646299E-05  |
| P110   | 2.4199865E-04  | 2.4749765E-04  | 2.7116587E-04  | 2.9194977E-04  |
| P111   | -5.1750721E-05 | 2.2452739E-10  | 2.7033798E-04  | 5.4064997E-04  |
| P112   | 4.9017712E-04  | 4.4179677E-04  | 1.9825277E-04  | -4.0080878E-05 |
| P113   | 4.4179677E-04  | 4.0321549E-04  | 2.0162330E-04  | 1.4296559E-10  |
| P114   | 1.9825277E-04  | 2.0162330E-04  | 2.1781029E-04  | 2.0937628E-04  |
| P115   | -4.0080878E-05 | 1.4296559E-10  | 2.0937628E-04  | 4.1873248E-04  |
| P116   | 2.7229893E-04  | 2.4851957E-04  | 1.2426938E-04  | 1.0198070E-10  |
| P117   | -2.6388545E-05 | 8.6710984E-11  | 1.3784962E-04  | 2.7568602E-04  |
| P118   | 1.1860049E-04  | 1.0824333E-04  | 5.4125831E-05  | 2.3606056E-11  |
| P119   | 1.3229533E-04  | 1.2074223E-04  | 6.0375762E-05  | 2.3950229E-11  |
| P120   | 6.1716942E-05  | 6.2849598E-05  | 6.8758550E-05  | 7.4659121E-05  |
| P121   | 1.8813079E-06  | 1.5519019E-06  | -1.6905051E-07 | -1.8900320E-06 |
| P122   | -1.4473577E-05 | 5.1408028E-11  | 7.5607718E-05  | 1.5120818E-04  |
| P123   | 4.6583853E-05  | 4.2515772E-05  | 2.1259526E-05  | 1.5317600E-11  |
| P124   | -5.7497498E-06 | 1.7480967E-11  | 3.0035782E-05  | 6.0068685E-05  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |

| TRIPL | P116           | P117           | P118           | P119           |
|-------|----------------|----------------|----------------|----------------|
| Q19   | 1.7982201E-03  | -1.8901757E-03 | 7.0164370E-04  | 8.0581948E-04  |
| Q20   | -5.0588686E-04 | 4.9515038E-04  | -1.6883397E-04 | -2.0295027E-04 |
| Q21   | -2.8482382E-04 | 2.2462578E-04  | -1.0767203E-04 | -1.2475577E-04 |
| Q22   | -2.5094719E-05 | 2.5861451E-05  | -9.4762857E-04 | -1.0981535E-03 |
| Q23   | -8.0248332E-05 | 9.7134378E-05  | -2.9585790E-05 | -3.4525471E-05 |
| Q24   | -2.3253078E-03 | 2.3977239E-03  | -8.7772133E-04 | -1.0174149E-03 |
| Q26   | -2.2128017E-03 | 2.2643616E-03  | -8.3482630E-04 | -9.6783307E-04 |
| Q28   | -6.7757166E-04 | 5.5957456E-04  | -1.4409096E-04 | -2.8339357E-04 |
| P100  | 4.2311574E-04  | 1.1493788E-04  | 1.6366170E-04  | 1.8843186E-04  |
| P101  | 2.0335047E-04  | 3.4419604E-04  | 7.8665806E-05  | 9.0560790E-05  |
| P102  | 7.7387632E-09  | 5.5632749E-04  | 1.0205824E-09  | 1.1705968E-09  |
| P103  | 3.7947325E-04  | 8.6204823E-05  | 1.4982497E-04  | 1.7151273E-04  |
| P104  | 1.8612359E-04  | 2.3932216E-04  | 7.3485820E-05  | 8.4123185E-05  |
| P105  | 1.8870158E-10  | 4.8618731E-04  | 3.8650356E-11  | 4.0692974E-11  |
| P106  | 3.3584069E-04  | 5.7472880E-05  | 1.3597182E-04  | 1.5459763E-04  |
| P107  | 1.6629766E-04  | 2.3787914E-04  | 6.7292477E-05  | 7.6510395E-05  |
| P108  | 1.7519175E-10  | 4.1603433E-04  | 3.9056279E-11  | 4.1723143E-11  |
| P109  | 2.9218361E-04  | 2.8735936E-05  | 1.2210919E-04  | 1.3767170E-04  |
| P110  | 1.4594191E-04  | 1.8716795E-04  | 6.0091936E-05  | 6.8765207E-05  |
| P111  | 1.4722696E-10  | 3.4585458E-04  | 3.3735106E-11  | 3.5956980E-11  |
| P112  | 2.7227893E-04  | -2.6388545E-05 | 1.1860049E-04  | 1.3229533E-04  |
| P113  | 2.4851957E-04  | 8.6710984E-11  | 1.0824333E-04  | 1.2074223E-04  |
| P114  | 1.2426936E-04  | 1.3784962E-04  | 5.4125831E-05  | 6.0375762E-05  |
| P115  | 1.0178070E-10  | 2.7568602E-04  | 2.3605056E-11  | 2.3950229E-11  |
| P116  | 1.6872614E-04  | 6.7057258E-11  | 7.9400536E-05  | 8.6890881E-05  |
| P117  | 6.7057258E-11  | 1.9520770E-04  | 1.3794168E-11  | 1.4015017E-11  |
| P118  | 7.9400536E-05  | 1.3794168E-11  | 5.5434371E-05  | 5.0556234E-05  |
| P119  | 8.6890881E-05  | 1.4015017E-11  | 5.0556234E-05  | 5.3037763E-05  |
| P120  | 4.5021581E-05  | 5.4936873E-05  | 2.4921320E-05  | 2.7192619E-05  |
| P121  | 1.1116850E-06  | -1.3907553E-06 | 6.1536155E-07  | 6.7144491E-07  |
| P122  | 4.2529371E-11  | 1.1126443E-04  | 1.0336175E-11  | 1.0557024E-11  |
| P123  | 3.1625636E-05  | 1.0669262E-11  | 1.9630684E-05  | 2.0734930E-05  |
| P124  | 1.5329976E-11  | 4.5243896E-05  | 2.9603765E-12  | 2.9603496E-12  |
| P125  | 0.             | 0.             | 0.             | 0.             |
| P126  | 0.             | 0.             | 0.             | 0.             |

| TRIPLE | P120           | P121           | P122           | P123           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | -6.0872826E-05 | 2.2660024E-05  | -9.7860483E-04 | 2.6953706E-04  |
| Q20    | 8.5145631E-06  | -5.5888343E-06 | 2.3486229E-04  | -6.2491927E-05 |
| Q21    | 8.5504891E-06  | -3.4926613E-06 | 1.5000339E-04  | -4.1075432E-05 |
| Q22    | 7.2574956E-05  | -3.0678183E-05 | 1.3150423E-03  | -3.6132630E-04 |
| Q23    | 6.1721640E-06  | -1.0643831E-06 | 4.9279855E-05  | -1.1222405E-05 |
| Q24    | 6.7622622E-05  | -2.8432712E-05 | 1.2191484E-03  | -3.3472644E-04 |
| Q26    | 5.9751778E-05  | -2.6932103E-05 | 1.1505026E-03  | -3.1833140E-04 |
| Q28    | -1.1140685E-05 | -7.8532599E-06 | 3.0691527E-04  | -1.0335599E-04 |
| P100   | 1.2993368E-04  | 1.6518002E-06  | 6.3041075E-05  | 6.2761431E-05  |
| P101   | 1.3694758E-04  | -1.0921718E-06 | 1.8118596E-04  | 3.0163296E-05  |
| P102   | 1.4343751E-04  | -3.6311555E-06 | 2.9050482E-04  | 4.0239032E-10  |
| P103   | 1.1316476E-04  | 1.6268582E-06  | 4.7281595E-05  | 5.7701119E-05  |
| P104   | 1.1965359E-04  | -8.2601839E-07 | 1.5311204E-04  | 2.8301123E-05  |
| P105   | 1.2624779E-04  | -3.1960202E-06 | 2.5569144E-04  | 2.4614556E-11  |
| P106   | 9.6398233E-05  | 1.6019609E-06  | 3.1522709E-05  | 5.2642202E-05  |
| P107   | 1.0260701E-04  | -5.9699605E-07 | 1.2678936E-04  | 2.6052640E-05  |
| P108   | 1.0905529E-04  | -2.7607850E-06 | 2.2087122E-04  | 2.3589495E-11  |
| P109   | 7.9624688E-05  | 1.5769578E-06  | 1.5761080E-05  | 4.7579629E-05  |
| P110   | 8.5669485E-05  | -3.7426023E-07 | 1.0083034E-04  | 2.3765403E-05  |
| P111   | 9.1855813E-05  | -2.3253731E-06 | 1.8603687E-04  | 2.0341874E-11  |
| P112   | 6.1716942E-05  | 1.8813079E-06  | -1.4473577E-05 | 4.6583853E-05  |
| P113   | 6.2649598E-05  | 1.5519019E-06  | 5.1408028E-11  | 4.2515772E-05  |
| P114   | 6.8758550E-05  | -1.6905051E-07 | 7.5607718E-05  | 2.1259526E-05  |
| P115   | 7.4659121E-05  | -1.8900320E-06 | 1.5120818E-04  | 1.5317600E-11  |
| P116   | 4.5021581E-05  | 1.1116850E-06  | 4.2529371E-11  | 3.1625636E-05  |
| P117   | 5.4936873E-05  | -1.3907553E-06 | 1.1126443E-04  | 1.0669262E-11  |
| P118   | 2.4921320E-05  | 6.1536155E-07  | 1.0336175E-11  | 1.9630684E-05  |
| P119   | 2.7192619E-05  | 6.7144491E-07  | 1.0557024E-11  | 2.0734930E-05  |
| P120   | 3.1466249E-05  | -9.2501665E-08 | 3.5213608E-05  | 1.0649357E-05  |
| P121   | -9.2501665E-08 | 1.9727136E-08  | -8.9145348E-07 | 2.6295523E-07  |
| P122   | 3.5213608E-05  | -8.9145348E-07 | 7.1318630E-05  | 7.9456189E-12  |
| P123   | 1.0649357E-05  | 2.6295523E-07  | 7.9456189E-12  | 1.1207886E-05  |
| P124   | 1.5019068E-05  | -3.8021715E-07 | 3.0418338E-05  | 3.2261046E-12  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |

| TRIPLE | P124           | P125 | P126 |
|--------|----------------|------|------|
| Q19    | -3.7431309E-04 | 0.   | 0.   |
| Q20    | 8.4174479E-05  | 0.   | 0.   |
| Q21    | 5.6708568E-05  | 0.   | 0.   |
| Q22    | 4.9670904E-04  | 0.   | 0.   |
| Q23    | 1.8583491E-05  | 0.   | 0.   |
| Q24    | 4.6046648E-04  | 0.   | 0.   |
| Q26    | 4.3431512E-04  | 0.   | 0.   |
| Q28    | 1.2192461E-04  | 0.   | 0.   |
| P100   | 2.5043575E-05  | 0.   | 0.   |
| P101   | 7.0088913E-05  | 0.   | 0.   |
| P102   | 1.1176914E-04  | 0.   | 0.   |
| P103   | 1.8782996E-05  | 0.   | 0.   |
| P104   | 5.9439226E-05  | 0.   | 0.   |
| P105   | 9.8848232E-05  | 0.   | 0.   |
| P106   | 1.2522650E-05  | 0.   | 0.   |
| P107   | 4.9452788E-05  | 0.   | 0.   |
| P108   | 8.5924662E-05  | 0.   | 0.   |
| P109   | 6.2612144E-06  | 0.   | 0.   |
| P110   | 3.9601443E-05  | 0.   | 0.   |
| P111   | 7.2995613E-05  | 0.   | 0.   |
| P112   | -5.7497498E-06 | 0.   | 0.   |
| P113   | 1.7480967E-11  | 0.   | 0.   |
| P114   | 3.0035782E-05  | 0.   | 0.   |
| P115   | 6.0068685E-05  | 0.   | 0.   |
| P116   | 1.5329976E-11  | 0.   | 0.   |
| P117   | 4.5243896E-05  | 0.   | 0.   |
| P118   | 2.9603765E-12  | 0.   | 0.   |
| P119   | 2.9603496E-12  | 0.   | 0.   |
| P120   | 1.5019068E-05  | 0.   | 0.   |
| P121   | -3.8021715E-07 | 0.   | 0.   |
| P122   | 3.0418338E-05  | 0.   | 0.   |
| P123   | 3.2261046E-12  | 0.   | 0.   |
| P124   | 1.6487375E-05  | 0.   | 0.   |
| P125   | 0.             | 0.   | 0.   |
| P126   | 0.             | 0.   | 0.   |



# PEDUNDANT SOLUTIONS

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| (GRN) | Q19            | Q20            | Q21            | Q22            |
|-------|----------------|----------------|----------------|----------------|
| P100  | 8.5728010E-02  | 4.4650370E-02  | 5.7729738E-02  | 5.0396289E-02  |
| P101  | 4.7678742E-02  | 1.1718191E-02  | 1.4225434E-02  | 3.1989105E-03  |
| P102  | 1.2471921E-02  | -1.8753778E-02 | -2.6028863E-02 | -4.0472605E-02 |
| P103  | 8.6022196E-03  | 5.5368335E-03  | 4.0102476E-02  | 2.0358777E-02  |
| P104  | 1.8823924E-02  | 1.5135301E-02  | 1.3644752E-02  | -3.6676048E-03 |
| P105  | 2.7249333E-02  | 2.6591991E-02  | -8.9366912E-03 | -3.0178057E-02 |
| P106  | -4.5721363E-03 | -5.2139221E-03 | 6.5412338E-03  | 5.4812015E-03  |
| P107  | 1.0828026E-02  | 1.2548075E-02  | 3.1191834E-03  | -2.3085936E-03 |
| P108  | 2.6423404E-02  | 2.9467602E-02  | -2.0345412E-03 | -7.8265709E-03 |
| P109  | -9.4640971E-03 | -1.1126373E-02 | 8.3514117E-04  | 2.3074138E-03  |
| P110  | 7.1635952E-03  | 7.8016413E-03  | -5.1169502E-04 | -3.0342118E-04 |
| P111  | 2.3844491E-02  | 2.6669754E-02  | -9.8714639E-04 | -3.7842414E-03 |
| P112  | -1.6792341E-02 | -1.9309220E-02 | 9.4578415E-04  | 2.8437611E-03  |
| P113  | -1.3549895E-02 | -1.5654435E-02 | 7.3448437E-04  | 2.3527005E-03  |
| P114  | 3.4130594E-03  | 3.5406936E-03  | -9.6514410E-05 | -1.2760321E-04 |
| P115  | 2.0962237E-02  | 2.3512278E-02  | -8.7334279E-04 | -3.2011072E-03 |
| P116  | -1.0335071E-02 | -1.1890054E-02 | 5.1293297E-04  | 1.6473227E-03  |
| P117  | 1.5101445E-02  | 1.6971315E-02  | -6.1165572E-04 | -2.2340089E-03 |
| P118  | -7.1271206E-03 | -8.1473187E-03 | 3.6084058E-04  | 1.0737070E-03  |
| P119  | -6.1711515E-03 | -7.0765514E-03 | 2.9991318E-04  | 9.4071500E-04  |
| P120  | 1.3298400E-03  | 1.4278410E-03  | -2.8770905E-05 | -1.6971078E-04 |
| P121  | -1.8330389E-04 | -2.0791460E-04 | 7.9008666E-06  | 2.7194650E-05  |
| P122  | 8.7536951E-03  | 9.8484328E-03  | -3.4875684E-04 | -1.2711006E-03 |
| P123  | -2.2433495E-03 | -2.5712501E-03 | 1.0573880E-04  | 3.3493876E-04  |
| P124  | 3.5945136E-03  | 4.0465966E-03  | -1.4184591E-04 | -5.1633608E-04 |
| P125  | -0.            | -0.            | 0.             | 0.             |
| P126  | -0.            | -0.            | 0.             | 0.             |

| (GRN) | Q23            | Q24            | Q26            | Q28            |
|-------|----------------|----------------|----------------|----------------|
| P100  | 2.5869404E-02  | 3.3407533E-02  | 3.7172851E-02  | 8.9515615E-03  |
| P101  | 4.5826603E-03  | 9.3079405E-03  | 1.7314714E-02  | -1.7308991E-02 |
| P102  | -1.5113861E-02 | -1.2991312E-02 | -1.0598991E-03 | -4.1607746E-02 |
| P103  | 2.4680358E-02  | 2.0823049E-02  | 2.7400032E-02  | 9.8022631E-03  |
| P104  | 8.7147810E-03  | 2.1575004E-03  | 1.1168536E-02  | -1.1119154E-02 |
| P105  | -7.7207596E-03 | -1.4536446E-02 | -4.2134463E-03 | -3.1250505E-02 |
| P106  | 2.6518669E-02  | 1.7239077E-02  | 2.8267719E-02  | 2.5868570E-02  |
| P107  | 8.8933961E-03  | 7.9730682E-04  | 6.3917100E-03  | -2.4119931E-03 |
| P108  | -6.3119102E-03 | -1.7952869E-02 | -1.4173191E-02 | -3.0302617E-02 |
| P109  | 3.9196270E-03  | 6.6892558E-03  | 2.5241140E-02  | 4.3032263E-02  |
| P110  | 2.9861062E-03  | -9.1421226E-04 | 4.2012377E-03  | 6.2603801E-03  |
| P111  | -1.3130698E-03 | -4.5818996E-03 | -1.9908078E-02 | -3.0272994E-02 |
| P112  | 1.3175482E-04  | 2.6178571E-03  | 1.4850356E-02  | 6.9057346E-02  |
| P113  | -3.6493373E-04 | 2.7856612E-03  | 1.3107619E-02  | 5.5421510E-02  |
| P114  | -1.3565248E-03 | 2.2705990E-03  | -7.4305346E-05 | 6.9863593E-03  |
| P115  | 2.6427836E-04  | -2.1667300E-03 | -1.1012543E-02 | -2.9036638E-02 |
| P116  | -1.1741463E-03 | 8.2642457E-04  | 5.4976631E-03  | 3.5436957E-02  |
| P117  | 9.4350885E-04  | -7.4568685E-04 | -5.1975730E-03 | -2.1687584E-02 |
| P118  | -7.1612670E-04 | -7.2046028E-05 | 2.2592486E-03  | 1.4469554E-03  |
| P119  | -8.3292850E-04 | 8.9625278E-05  | 2.0726037E-03  | 1.3667510E-02  |
| P120  | -4.4678710E-05 | -1.2535558E-05 | -1.7000743E-05 | 2.2717658E-03  |
| P121  | -2.0761310E-05 | 3.7014190E-06  | 5.1614107E-05  | 3.7278722E-04  |
| P122  | 7.9615208E-04  | -1.6244251E-04 | -2.1073691E-03 | -1.2825987E-02 |
| P123  | -3.6347426E-04 | -2.5952093E-05 | 5.2433041E-04  | 5.4023169E-03  |
| P124  | 3.8554044E-04  | -3.2494135E-06 | -6.5239428E-04 | -5.3265828E-03 |
| P125  | 0.             | -0.            | 0.             | -0.            |
| P126  | 0.             | -0.            | 0.             | -0.            |

## INFLUENCE FLEXIBILITY COEFFICIENT MATRIX

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| (AMN) | P100           | P101           | P102           | P103           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 1.6865008E-03  | 1.6310954E-03  | 1.5798290E-03  | 1.2641685E-03  |
| P101  | 1.6310954E-03  | 1.6591420E-03  | 1.6850935E-03  | 1.2587620E-03  |
| P102  | 1.5798292E-03  | 1.6850935E-03  | 1.7824943E-03  | 1.2537593E-03  |
| P103  | 1.2641684E-03  | 1.2587620E-03  | 1.2537593E-03  | 1.0281105E-03  |
| P104  | 1.2550481E-03  | 1.2841097E-03  | 1.3110001E-03  | 1.0239159E-03  |
| P105  | 1.2503314E-03  | 1.3123312E-03  | 1.3696996E-03  | 1.0219937E-03  |
| P106  | 9.2890916E-04  | 9.2098573E-04  | 9.1365420E-04  | 7.7758151E-04  |
| P107  | 9.3708122E-04  | 9.5941668E-04  | 9.8008351E-04  | 7.8491137E-04  |
| P108  | 9.4867867E-04  | 1.0007914E-03  | 1.0490112E-03  | 7.9502906E-04  |
| P109  | 6.5209728E-04  | 6.3306397E-04  | 6.1545250E-04  | 5.5476543E-04  |
| P110  | 6.7211208E-04  | 6.8629035E-04  | 6.9940939E-04  | 5.7241698E-04  |
| P111  | 6.9534767E-04  | 7.4289829E-04  | 7.8689668E-04  | 5.9272380E-04  |
| P112  | 4.1623361E-04  | 3.8198524E-04  | 3.5029535E-04  | 3.5903695E-04  |
| P113  | 4.2661002E-04  | 3.9891083E-04  | 3.7328087E-04  | 3.6759411E-04  |
| P114  | 4.6334560E-04  | 4.6992155E-04  | 4.7600623E-04  | 3.9883074E-04  |
| P115  | 4.8554844E-04  | 5.2766235E-04  | 5.6663017E-04  | 4.1920131E-04  |
| P116  | 2.4369443E-04  | 2.2248242E-04  | 2.0285504E-04  | 2.1195657E-04  |
| P117  | 2.9414298E-04  | 3.2462524E-04  | 3.5283034E-04  | 2.5700657E-04  |
| P118  | 9.9920374E-05  | 8.5312376E-05  | 7.1795659E-05  | 8.8025748E-05  |
| P119  | 1.1250998E-04  | 9.9834688E-05  | 8.8106288E-05  | 9.8626457E-05  |
| P120  | 1.3378667E-04  | 1.3638394E-04  | 1.3878719E-04  | 1.1759713E-04  |
| P121  | -4.5168532E-07 | -8.2500021E-07 | -1.1704269E-06 | -4.0703964E-07 |
| P122  | 1.5208524E-04  | 1.6980186E-04  | 1.8619497E-04  | 1.3408688E-04  |
| P123  | 3.8266059E-05  | 3.3652154E-05  | 2.9382929E-05  | 3.3687929E-05  |
| P124  | 5.8118883E-05  | 6.5404946E-05  | 7.2146709E-05  | 5.1558021E-05  |
| P125  | 0.             | -0.            | -0.            | 0.             |
| P126  | 0.             | -0.            | -0.            | 0.             |

| (AMN) | P104           | P105           | P106           | P107           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 1.2550481E-03  | 1.2503313E-03  | 9.2890922E-04  | 9.3708119E-04  |
| P101  | 1.2841097E-03  | 1.3122512E-03  | 9.2098573E-04  | 9.5941668E-04  |
| P102  | 1.3110001E-03  | 1.3596996E-03  | 9.1365420E-04  | 9.8008351E-04  |
| P103  | 1.0239159E-03  | 1.0219937E-03  | 7.7758151E-04  | 7.8491137E-04  |
| P104  | 1.0561012E-03  | 1.0692445E-03  | 7.6937221E-04  | 8.0138874E-04  |
| P105  | 1.0692445E-03  | 1.1167983E-03  | 7.6356437E-04  | 8.1923300E-04  |
| P106  | 7.6937221E-04  | 7.6356437E-04  | 6.2982920E-04  | 6.1914975E-04  |
| P107  | 8.0138874E-04  | 8.1923300E-04  | 6.1914975E-04  | 6.5296469E-04  |
| P108  | 8.3566896E-04  | 8.7686299E-04  | 6.1051281E-04  | 6.6638076E-04  |
| P109  | 5.3855396E-04  | 5.2450045E-04  | 4.6836745E-04  | 4.4641804E-04  |
| P110  | 5.8274726E-04  | 5.9432146E-04  | 4.6424115E-04  | 4.7863793E-04  |
| P111  | 6.2972456E-04  | 6.6698374E-04  | 4.6192044E-04  | 5.1262732E-04  |
| P112  | 3.3115688E-04  | 3.0530641E-04  | 3.2151109E-04  | 2.8388542E-04  |
| P113  | 3.4491676E-04  | 3.2410337E-04  | 3.2444108E-04  | 2.9385677E-04  |
| P114  | 4.0340586E-04  | 4.0893109E-04  | 3.3019966E-04  | 3.3658707E-04  |
| P115  | 4.5208687E-04  | 4.8491141E-04  | 3.2809101E-04  | 3.7294627E-04  |
| P116  | 1.9473787E-04  | 1.7874358E-04  | 1.9234571E-04  | 1.6915891E-04  |
| P117  | 2.8085822E-04  | 3.0453841E-04  | 2.0202990E-04  | 2.3447312E-04  |
| P118  | 7.6270655E-05  | 6.5191296E-05  | 8.4504995E-05  | 6.0671379E-05  |
| P119  | 8.8391351E-05  | 7.8806533E-05  | 9.1991947E-05  | 7.8214444E-05  |
| P120  | 1.1947798E-04  | 1.2161463E-04  | 9.9816167E-05  | 1.0243143E-04  |
| P121  | -7.0328757E-07 | -9.8972348E-07 | -1.4634515E-07 | -5.4716839E-07 |
| P122  | 1.4796584E-04  | 1.6170321E-04  | 1.0574706E-04  | 1.2459576E-04  |
| P123  | 2.9967735E-05  | 2.6477726E-05  | 3.1746331E-05  | 2.6741002E-05  |
| P124  | 5.7269605E-05  | 6.2913127E-05  | 4.0750625E-05  | 4.8500467E-05  |
| P125  | -0.            | -0.            | 0.             | -0.            |
| P126  | -0.            | -0.            | 0.             | -0.            |

| (AMN) | P108           | P109          | P110           | P111           |
|-------|----------------|---------------|----------------|----------------|
| P100  | 9.4867859E-04  | 6.5209736E-04 | 6.7211205E-04  | 6.9534764E-04  |
| P101  | 1.0007914E-03  | 6.3306397E-04 | 6.8629035E-04  | 7.4289829E-04  |
| P102  | 1.0490112E-03  | 6.1545250E-04 | 6.9940939E-04  | 7.8689668E-04  |
| P103  | 7.9502906E-04  | 5.5476543E-04 | 5.7241698E-04  | 5.7272380E-04  |
| P104  | 8.3566896E-04  | 5.3855396E-04 | 5.8274726E-04  | 6.2972456E-04  |
| P105  | 8.7686299E-04  | 5.2450045E-04 | 5.9432146E-04  | 6.6698374E-04  |
| P106  | 6.1051281E-04  | 4.6836745E-04 | 4.6424115E-04  | 4.6192044E-04  |
| P107  | 6.6638076E-04  | 4.4641804E-04 | 4.7863793E-04  | 5.1262732E-04  |
| P108  | 7.2322587E-04  | 4.2641996E-04 | 4.9426964E-04  | 5.6413403E-04  |
| P109  | 4.2641996E-04  | 3.8143535E-04 | 3.5462827E-04  | 3.2825812E-04  |
| P110  | 4.9426964E-04  | 3.5462827E-04 | 3.8263239E-04  | 3.9503752E-04  |
| P111  | 5.6413403E-04  | 3.2825812E-04 | 3.7503752E-04  | 4.6269384E-04  |
| P112  | 2.4789853E-04  | 2.8538646E-04 | 2.3728831E-04  | 1.8945881E-04  |
| P113  | 2.6485273E-04  | 2.8245040E-04 | 2.4352250E-04  | 2.0479502E-04  |
| P114  | 3.4411887E-04  | 2.6089733E-04 | 2.7028531E-04  | 2.7977870E-04  |
| P115  | 4.1825709E-04  | 2.3428675E-04 | 2.9330373E-04  | 3.5296842E-04  |
| P116  | 1.4697517E-04  | 1.7388531E-04 | 1.4413188E-04  | 1.1448797E-04  |
| P117  | 2.6713135E-04  | 1.4498342E-04 | 1.8766932E-04  | 2.3077965E-04  |
| P118  | 5.3341745E-05  | 8.1811448E-05 | 6.1348318E-05  | 4.0961524E-05  |
| P119  | 6.4948957E-05  | 8.6100018E-05 | 6.8338255E-05  | 5.0634477E-05  |
| P120  | 1.0535006E-04  | 8.1785990E-05 | 8.5411344E-05  | 8.9178109E-05  |
| P121  | -9.4265352E-07 | 1.3887435E-07 | -3.8393688E-07 | -9.0898638E-07 |
| P122  | 1.4353163E-04  | 7.6164758E-05 | 1.0096409E-04  | 1.2599549E-04  |
| P123  | 2.1916002E-05  | 3.0090232E-05 | 2.3627436E-05  | 1.7182923E-05  |
| P124  | 5.6277298E-05  | 2.9422983E-05 | 3.9619468E-05  | 4.9907961E-05  |
| P125  | -0.            | 0.            | 0.             | -0.            |
| P126  | -0.            | 0.            | 0.             | -0.            |

| (AMN) | P112          | P113          | P114           | P115           |
|-------|---------------|---------------|----------------|----------------|
| P100  | 4.1623363E-04 | 4.2661004E-04 | 4.6334558E-04  | 4.8554639E-04  |
| P101  | 3.8178524E-04 | 3.7891083E-04 | 4.6992155E-04  | 5.2766235E-04  |
| P102  | 3.5029535E-04 | 3.7328087E-04 | 4.7600623E-04  | 5.6663017E-04  |
| P103  | 3.5903695E-04 | 3.6759411E-04 | 3.9883074E-04  | 4.1920131E-04  |
| P104  | 3.3115688E-04 | 3.4491676E-04 | 4.0340586E-04  | 4.5208687E-04  |
| P105  | 3.0530641E-04 | 3.2410337E-04 | 4.0893109E-04  | 4.8491141E-04  |
| P106  | 3.2151109E-04 | 3.2444108E-04 | 3.5019966E-04  | 3.2809101E-04  |
| P107  | 2.8388542E-04 | 2.9385677E-04 | 3.3658707E-04  | 3.7294627E-04  |
| P108  | 2.4789853E-04 | 2.6485273E-04 | 3.4411887E-04  | 4.1825709E-04  |
| P109  | 2.8538646E-04 | 2.8245040E-04 | 2.6087733E-04  | 2.3428675E-04  |
| P110  | 2.3728831E-04 | 2.4352250E-04 | 2.7028531E-04  | 2.9330373E-04  |
| P111  | 1.8945881E-04 | 2.0479502E-04 | 2.7977870E-04  | 3.5296842E-04  |
| P112  | 2.5360055E-04 | 2.4240816E-04 | 1.8747874E-04  | 1.3367327E-04  |
| P113  | 2.4240816E-04 | 2.3479989E-04 | 1.9247974E-04  | 1.4706519E-04  |
| P114  | 1.8747874E-04 | 1.9247974E-04 | 2.1659760E-04  | 2.1596324E-04  |
| P115  | 1.3367327E-04 | 1.4706519E-04 | 2.1596324E-04  | 2.8485150E-04  |
| P116  | 1.5871508E-04 | 1.5295518E-04 | 1.1922301E-04  | 8.3142184E-05  |
| P117  | 8.1983000E-05 | 9.1497948E-05 | 1.4184671E-04  | 1.9281589E-04  |
| P118  | 8.2632555E-05 | 7.7708472E-05 | 5.3156621E-05  | 2.9136671E-05  |
| P119  | 8.2830609E-05 | 7.9111616E-05 | 5.8388376E-05  | 3.6826677E-05  |
| P120  | 6.3085028E-05 | 6.4070044E-05 | 6.8633749E-05  | 7.2864081E-05  |
| P121  | 5.0131480E-07 | 3.9053840E-07 | -2.2322703E-07 | -8.5923114E-07 |
| P122  | 4.2784196E-05 | 4.8255691E-05 | 7.7677054E-05  | 1.0766570E-04  |
| P123  | 2.9455422E-05 | 2.8132536E-05 | 2.0565043E-05  | 1.2602349E-05  |
| P124  | 1.6454062E-05 | 1.8690479E-05 | 3.0827273E-05  | 4.3245847E-05  |
| P125  | 0.            | 0.            | 0.             | -0.            |
| P126  | 0.            | 0.            | 0.             | -0.            |

| (AMN) | P116          | P117           | P118          | P119          |
|-------|---------------|----------------|---------------|---------------|
| P100  | 2.4369443E-04 | 2.9414298E-04  | 9.9920381E-05 | 1.1251000E-04 |
| P101  | 2.2248242E-04 | 3.2462524E-04  | 8.5312376E-05 | 9.9834688E-05 |
| P102  | 2.028504E-04  | 3.5283034E-04  | 7.1795659E-05 | 8.8106288E-05 |
| P103  | 2.1195657E-04 | 2.5700657E-04  | 8.8025748E-05 | 9.8626457E-05 |
| P104  | 1.9473787E-04 | 2.8085822E-04  | 7.6270655E-05 | 8.8391351E-05 |
| P105  | 1.7874358E-04 | 3.0453841E-04  | 6.5191296E-05 | 7.8806533E-05 |
| P106  | 1.9234571E-04 | 2.0202990E-04  | 8.4504995E-05 | 9.1991947E-05 |
| P107  | 1.6915891E-04 | 2.3447312E-04  | 6.8671379E-05 | 7.8214444E-05 |
| P108  | 1.4697517E-04 | 2.6713135E-04  | 5.3341745E-05 | 6.4948957E-05 |
| P109  | 1.7388531E-04 | 1.4498342E-04  | 8.1811448E-05 | 8.6100018E-05 |
| P110  | 1.4413188E-04 | 1.8766932E-04  | 6.1348318E-05 | 6.8338255E-05 |
| P111  | 1.1448797E-04 | 2.3077965E-04  | 4.0961524E-05 | 5.0634477E-05 |
| P112  | 1.5871508E-04 | 8.1983000E-05  | 8.2632555E-05 | 8.2830609E-05 |
| P113  | 1.5295518E-04 | 9.1497948E-05  | 7.7708472E-05 | 7.9111616E-05 |
| P114  | 1.1922301E-04 | 1.4184671E-04  | 5.3156621E-05 | 5.8388376E-05 |
| P115  | 8.3142184E-05 | 1.9281589E-04  | 2.9136671E-05 | 3.6826677E-05 |
| P116  | 1.1387264E-04 | 5.2204946E-05  | 6.2154126E-05 | 6.2939064E-05 |
| P117  | 5.2204946E-05 | 1.4350768E-04  | 1.8003580E-05 | 2.3156913E-05 |
| P118  | 6.2154126E-05 | 1.8003580E-05  | 4.8742953E-05 | 4.2743842E-05 |
| P119  | 6.2939064E-05 | 2.3156913E-05  | 4.2743842E-05 | 4.2489004E-05 |
| P120  | 4.5655748E-05 | 5.3881195E-05  | 2.5476389E-05 | 2.7551353E-05 |
| P121  | 4.4300823E-07 | -7.4223704E-07 | 3.9579624E-07 | 3.7643341E-07 |
| P122  | 2.7715600E-05 | 8.3953765E-05  | 9.4474834E-06 | 1.2306706E-05 |
| P123  | 2.3290544E-05 | 7.9772745E-06  | 1.6979434E-05 | 1.7068533E-05 |
| P124  | 1.0782132E-05 | 3.4641978E-05  | 3.6469261E-06 | 4.7909095E-06 |
| P125  | 0.            | -0.            | 0.            | 0.            |
| P126  | 0.            | -0.            | 0.            | 0.            |

| (AMN) | P120           | P121           | P122           | P123          |
|-------|----------------|----------------|----------------|---------------|
| P100  | 1.3378666E-04  | -4.5168492E-07 | 1.5208523E-04  | 3.8266059E-05 |
| P101  | 1.3638394E-04  | -8.2500021E-07 | 1.6980186E-04  | 3.3652154E-05 |
| P102  | 1.3878719E-04  | -1.1704269E-06 | 1.8619497E-04  | 2.9382929E-05 |
| P103  | 1.1759713E-04  | -4.0703964E-07 | 1.3408688E-04  | 3.3687929E-05 |
| P104  | 1.1947798E-04  | -7.0328757E-07 | 1.4796584E-04  | 2.9967735E-05 |
| P105  | 1.2161463E-04  | -9.8572348E-07 | 1.6170321E-04  | 2.6477726E-05 |
| P106  | 9.9816167E-05  | -1.4614515E-07 | 1.0574706E-04  | 3.1746331E-05 |
| P107  | 1.0243143E-04  | -5.4716839E-07 | 1.2459576E-04  | 2.6741002E-05 |
| P108  | 1.0535006E-04  | -9.4265352E-07 | 1.4353163E-04  | 2.1916007E-05 |
| P109  | 8.1785990E-05  | 1.3887435E-07  | 7.6164758E-05  | 3.0090232E-05 |
| P110  | 8.5411344E-05  | -3.8393688E-07 | 1.0096409E-04  | 2.3627436E-05 |
| P111  | 8.9178109E-05  | -9.0898638E-07 | 1.2599549E-04  | 1.7182923E-05 |
| P112  | 6.3085028E-05  | 5.0131480E-07  | 4.2784196E-05  | 2.9455422E-05 |
| P113  | 6.4070044E-05  | 3.9053840E-07  | 4.8255691E-05  | 2.8132536E-05 |
| P114  | 6.8633749E-05  | -2.2322703E-07 | 7.7677054E-05  | 2.0565043E-05 |
| P115  | 7.2864081E-05  | -8.5923114E-07 | 1.0766570E-04  | 1.2602349E-05 |
| P116  | 4.5655748E-05  | 4.4300823E-07  | 2.7715600E-05  | 2.3290544E-05 |
| P117  | 5.3881195E-05  | -7.4223704E-07 | 8.3943765E-05  | 7.9772745E-06 |
| P118  | 2.5476389E-05  | 3.9579624E-07  | 9.4474834E-06  | 1.6979434E-05 |
| P119  | 2.7551353E-05  | 3.7643341E-07  | 1.2306706E-05  | 1.7068533E-05 |
| P120  | 3.1357445E-05  | -8.2019447E-08 | 3.4680269E-05  | 1.0756381E-05 |
| P121  | -8.2019447E-08 | 1.1472774E-08  | -5.4666972E-07 | 1.6042419E-07 |
| P122  | 3.4680269E-05  | -5.4666972E-07 | 5.6821551E-05  | 4.2595364E-06 |
| P123  | 1.0756381E-05  | 1.6042419E-07  | 4.2595364E-06  | 9.9260304E-06 |
| P124  | 1.4818549E-05  | -2.4596207E-07 | 2.4780489E-05  | 1.6633433E-06 |
| P125  | 0.             | 0.             | -0.            | 0.            |
| P126  | 0.             | 0.             | -0.            | 0.            |



| (AMN) | P124           | P125 | P126 |
|-------|----------------|------|------|
| P100  | 5.8118873E-05  | 0.   | 0.   |
| P101  | 6.5404946E-05  | -0.  | -0.  |
| P102  | 7.2146709E-05  | -0.  | -0.  |
| P103  | 5.1558021E-05  | 0.   | 0.   |
| P104  | 5.7269605E-05  | -0.  | -0.  |
| P105  | 6.2913127E-05  | -0.  | -0.  |
| P106  | 4.0750625E-05  | 0.   | 0.   |
| P107  | 4.8500467E-05  | -0.  | -0.  |
| P108  | 5.6277298E-05  | -0.  | -0.  |
| P109  | 2.9422983E-05  | 0.   | 0.   |
| P110  | 3.9619468E-05  | 0.   | 0.   |
| P111  | 4.9907961E-05  | -0.  | -0.  |
| P112  | 1.6454062E-05  | 0.   | 0.   |
| P113  | 1.8690479E-05  | 0.   | 0.   |
| P114  | 3.0827273E-05  | 0.   | 0.   |
| P115  | 4.3245847E-05  | -0.  | -0.  |
| P116  | 1.0782132E-05  | 0.   | 0.   |
| P117  | 3.4647978E-05  | -0.  | -0.  |
| P118  | 3.6469261E-06  | 0.   | 0.   |
| P119  | 4.7909095E-06  | 0.   | 0.   |
| P120  | 1.4818549E-05  | 0.   | 0.   |
| P121  | -2.4596207E-07 | 0.   | 0.   |
| P122  | 2.4780489E-05  | -0.  | -0.  |
| P123  | 1.6633433E-06  | 0.   | 0.   |
| P124  | 1.4290891E-05  | -0.  | -0.  |
| P125  | -0.            | -0.  | -0.  |
| P126  | -0.            | -0.  | -0.  |

## INTERNAL LOADS ON REDUNDANT STRUCTURE FOR UNIT APPLIED LOADS

PAGE 100

| (GIM) |     | P100           | P101           | P102           | P103           |
|-------|-----|----------------|----------------|----------------|----------------|
| 1     | Q1  | 7.3743330E-03  | -7.0592613E-02 | -1.4273505E-01 | 5.7818248E-04  |
| 2     | Q2  | -3.7448720E-02 | -4.6226306E-02 | -5.4348159E-02 | -3.8649546E-02 |
| 3     | Q3  | -3.0560201E-02 | -4.0802201E-02 | -5.0279057E-02 | -4.0088961E-02 |
| 4     | Q4  | -2.9106365E-02 | -2.8651857E-02 | -2.8231327E-02 | -3.7626211E-02 |
| 5     | Q5  | -4.2811093E-02 | -6.0989379E-02 | -7.7809662E-02 | -4.5856968E-02 |
| 6     | Q6  | -4.2811100E-02 | -6.0989388E-02 | -7.7809666E-02 | -4.5856974E-02 |
| 7     | Q7  | -4.2811102E-02 | -6.0989389E-02 | -7.7809665E-02 | -4.5856974E-02 |
| 8     | Q8  | -4.2811102E-02 | -6.0989389E-02 | -7.7809665E-02 | -4.5856974E-02 |
| 9     | Q9  | 3.1877837E-01  | 3.5692975E-01  | 3.9223107E-01  | 2.8167790E-01  |
| 10    | Q10 | 1.4431284E-01  | 6.6924705E-02  | -4.6821443E-03 | -5.4814089E-04 |
| 11    | Q11 | 6.5441347E-02  | 5.6523795E-02  | 4.8272414E-02  | 8.2962706E-02  |
| 12    | Q12 | 5.3369186E-02  | 4.2213346E-02  | 3.1890914E-02  | 5.5683387E-02  |
| 13    | Q13 | 5.4046791E-02  | 5.5494645E-02  | 5.6834316E-02  | 5.1535957E-02  |
| 14    | Q14 | 5.0377540E-02  | 5.8094675E-02  | 6.5235294E-02  | 4.6503384E-02  |
| 15    | Q15 | 5.0377546E-02  | 5.8094675E-02  | 6.5235299E-02  | 4.6503387E-02  |
| 16    | Q16 | 1.1031375E-01  | 1.0262516E-01  | 9.5510932E-02  | 9.8538680E-02  |
| 17    | Q17 | 1.1031375E-01  | 1.0262516E-01  | 9.5510937E-02  | 9.8538687E-02  |
| 18    | Q18 | 4.6004067E-03  | 1.7240458E-03  | -9.3745463E-04 | -6.1025290E-03 |
| 19    | Q25 | -3.6996827E-03 | -2.4946813E-02 | -4.4606668E-02 | 7.3341885E-04  |
| 20    | Q30 | -5.1004424E-02 | -6.1864056E-02 | -7.1912404E-02 | -4.2249379E-02 |
| 21    | Q31 | -3.4849940E-02 | 6.6749043E-03  | 4.509123E-02   | -4.1473290E-02 |
| 22    | Q32 | -3.8245497E-02 | 4.9302065E-03  | 4.4860472E-02  | -3.4870819E-02 |
| 23    | Q33 | 2.8454959E-03  | -7.1224532E-04 | -4.0041894E-03 | -6.1678744E-03 |
| 24    | Q34 | -1.6071538E-03 | -4.5515820E-03 | -7.2760322E-03 | -8.7879398E-03 |
| 25    | Q35 | 9.3312352E-03  | 1.7282409E-02  | 2.4639567E-02  | 5.9645222E-03  |
| 26    | Q36 | -3.9507006E-03 | 2.8204142E-03  | 9.0856625E-03  | -4.7419925E-03 |
| 27    | Q37 | -1.4883821E-02 | -2.8643773E-02 | -4.1375775E-02 | -1.0505042E-02 |
| 28    | Q38 | 7.0020698E-03  | -7.8235364E-03 | -2.1541581E-02 | 5.3990301E-03  |
| 29    | P40 | -6.3980219E-01 | -1.4127744E 00 | -2.1280021E 00 | -8.5109791E-02 |
| 30    | P41 | -2.1475652E 00 | -2.2611038E 00 | -2.3661607E 00 | -1.0979228E 00 |
| 31    | P42 | -3.2455649E 00 | -3.1212395E 00 | -3.0062011E 00 | -2.1434713E 00 |
| 32    | P43 | -4.3831747E 00 | -3.9102050E 00 | -3.4725689E 00 | -3.2595752E 00 |
| 33    | P44 | -4.3809832E 00 | -3.9082499E 00 | -3.4708327E 00 | -3.2579454E 00 |
| 34    | P45 | -5.2238052E 00 | -5.1089479E 00 | -5.0026713E 00 | -4.1607316E 00 |
| 35    | P46 | -6.0666701E 00 | -6.3097069E 00 | -6.5345880E 00 | -5.0635637E 00 |
| 36    | P47 | -6.8586755E 00 | -7.4380105E 00 | -7.9740672E 00 | -5.9119177E 00 |
| 37    | P48 | -7.6506810E 00 | -8.5663145E 00 | -9.4135460E 00 | -6.7602718E 00 |
| 38    | P49 | 0.             | -0.            | -0.            | 0.             |
| 39    | P50 | -1.2523592E 00 | -4.1141812E-01 | 3.6669984E-01  | 1.9560588E-01  |
| 40    | P51 | -1.4172091E 00 | -1.3156238E 00 | -1.2216274E 00 | -7.2061082E-01 |
| 41    | P52 | -2.0051242E 00 | -2.1201265E 00 | -2.2265378E 00 | -1.3834214E 00 |
| 42    | P53 | -3.2395619E 00 | -3.8397116E 00 | -4.3950265E 00 | -2.4694197E 00 |
| 43    | P54 | -2.7280164E 00 | -3.2333989E 00 | -3.7010264E 00 | -2.0794842E 00 |
| 44    | P55 | -3.9534708E 00 | -4.0758355E 00 | -4.1890581E 00 | -3.2424885E 00 |
| 45    | P56 | -5.1789905E 00 | -4.9183168E 00 | -4.6771159E 00 | -4.4055547E 00 |
| 46    | P57 | -4.9360959E 00 | -4.6876478E 00 | -4.4577591E 00 | -4.1989344E 00 |
| 47    | P58 | -6.0333181E 00 | -5.4417281E 00 | -4.8942021E 00 | -5.2402865E 00 |
| 48    | P59 | -7.1305403E 00 | -6.1958085E 00 | -5.3309049E 00 | -6.2816390E 00 |
| 49    | P60 | 0.             | -0.            | -0.            | 0.             |
| 50    | P62 | -1.1040975E-01 | -4.1377097E-02 | 2.2498913E-02  | 1.4646070E-01  |

| (GIM)  | P100           | P101           | P.02           | P103           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | -1.1038764E-01 | -4.1368803E-02 | 2.2494409E-02  | 1.4643134E-01  |
| 52 P64 | 1.4318742E-02  | 5.3660834E-03  | -2.9178229E-03 | -1.8794093E-02 |
| 53 P67 | -1.3223359E-01 | -1.1615800E-01 | -1.0128336E-01 | -8.3107191E-02 |
| 54 P68 | -1.3220707E-01 | -1.1613472E-01 | -1.0126307E-01 | -8.3090526E-02 |
| 55 P69 | 1.7142017E-02  | 1.5064217E-02  | 1.3135164E-02  | 1.0777948E-02  |
| 56 P72 | -4.4682072E-01 | -4.8137907E-01 | -5.1335607E-01 | -3.6130434E-01 |
| 57 P73 | -4.4673116E-01 | -4.8128262E-01 | -5.1325323E-01 | -3.6123191E-01 |
| 58 P74 | 5.7946972E-02  | 6.2428750E-02  | 6.6575760E-02  | 4.6856580E-02  |
| 59 P77 | 1.2394674E 00  | 1.0592590E 00  | 8.9251275E-01  | 9.8853430E-01  |
| 60 P79 | 8.2188003E-01  | 7.7259529E-01  | 7.2514191E-01  | 5.9893802E-01  |
| 61 P80 | 8.2371486E-01  | 7.7244045E-01  | 7.2499658E-01  | 5.9881801E-01  |
| 62 P81 | -1.0684676E-01 | -1.0019579E-01 | -9.4041687E-02 | -7.7674653E-02 |
| 63 P82 | 1.3324850E-01  | 1.1887022E-01  | 1.0556608E-01  | 9.9091082E-02  |
| 64 P83 | 0.             | -0.            | -0.            | 0.             |
| 65 P84 | 0.             | -0.            | -0.            | 0.             |
| 66 P93 | -7.5405647E-01 | -6.6012280E-01 | -5.7320577E-01 | -5.6270862E-02 |
| 67 P94 | -8.8867557E-01 | -8.6253515E-01 | -8.3834749E-01 | -4.1870318E-01 |
| 68 P95 | -7.5029136E-01 | -7.7578894E-01 | -7.9938196E-01 | -4.8951527E-01 |
| 69 P96 | 3.5797358E 00  | 4.1373995E 00  | 4.6534036E 00  | 3.2425962E 00  |
| 70 P97 | 1.0254194E 00  | 9.7874076E-01  | 9.3554937E-01  | 1.0150198E 00  |
| 71 Q19 | 8.5728010E-02  | 4.7678742E-02  | 1.2471921E-02  | 8.6022196E-03  |
| 72 Q20 | 4.4650370E-02  | 1.1718191E-02  | -1.8753778E-02 | 5.5368335E-03  |
| 73 Q21 | 5.7729738E-02  | 1.4225434E-02  | -2.6028863E-02 | 4.0102476E-02  |
| 74 Q22 | 5.0396289E-02  | 3.1989105E-03  | -4.0472605E-02 | 2.0358777E-02  |
| 75 Q23 | 2.5869404E-02  | 4.5826603E-03  | -1.5113861E-02 | 2.4680358E-02  |
| 76 Q24 | 3.3407533E-02  | 9.3079405E-03  | -1.2991312E-02 | 2.0823049E-02  |
| 77 Q26 | 3.7172851E-02  | 1.7314714E-02  | -1.0598991E-03 | 2.7400032E-02  |
| 78 Q28 | 8.9515615E-03  | -1.7308991E-02 | -4.1607746E-02 | 9.8022631E-03  |

| IGIM.  | P104           | P105           | P106           | P107           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 8.0283550E-04  | 4.4511439E-04  | 4.0491439E-05  | -1.2654329E-04 |
| 2 Q2   | -5.8136378E-02 | -7.5628682E-02 | -1.2405223E-02 | 8.0647906E-03  |
| 3 Q3   | -4.9058592E-02 | -5.8282063E-02 | -3.5978174E-02 | -5.6616241E-02 |
| 4 Q4   | -3.6712819E-02 | -3.6075394E-02 | -4.5694078E-02 | -4.4586922E-02 |
| 5 Q5   | -6.0194285E-02 | -7.4134759E-02 | -3.8456853E-02 | -5.7750798E-02 |
| 6 Q6   | -6.0194290E-02 | -7.4134766E-02 | -3.8456858E-02 | -5.7750803E-02 |
| 7 Q7   | -6.0194292E-02 | -7.4134766E-02 | -3.8456859E-02 | -5.7750803E-02 |
| 8 Q8   | -6.0194292E-02 | -7.4134766E-02 | -3.8456859E-02 | -5.7750803E-02 |
| 9 Q9   | 3.1157272E-01  | 3.4114317E-01  | 2.2232078E-01  | 2.6240648E-01  |
| 10 Q10 | -7.6112127E-04 | -4.2198694E-04 | -3.8387516E-05 | 1.1996819E-04  |
| 11 Q11 | 6.4313169E-02  | 4.5884374E-02  | -1.3279307E-02 | 6.3059662E-03  |
| 12 Q12 | 4.5633624E-02  | 3.6505296E-02  | 7.4122138E-02  | 5.3552217E-02  |
| 13 Q13 | 5.3048909E-02  | 5.4600266E-02  | 4.8568354E-02  | 5.0333080E-02  |
| 14 Q14 | 5.2642262E-02  | 5.8685241E-02  | 3.7983972E-02  | 4.6418396E-02  |
| 15 Q15 | 5.2642265E-02  | 5.8685245E-02  | 3.7983976E-02  | 4.6418399E-02  |
| 16 Q16 | 9.2314759E-02  | 8.6592797E-02  | 9.1040729E-02  | 8.2755437E-02  |
| 17 Q17 | 9.2314762E-02  | 8.6592801E-02  | 9.1040738E-02  | 8.2755439E-02  |
| 18 Q18 | -4.3548432E-02 | -7.7020298E-03 | -2.0322870E-04 | -2.1590021E-03 |
| 19 Q25 | -1.6390097E-02 | -3.2928227E-02 | 1.7285783E-02  | -5.4125662E-03 |
| 20 Q30 | -5.0811778E-02 | -5.9181880E-02 | -2.7198305E-02 | -3.8764263E-02 |
| 21 Q31 | 5.6594051E-02  | 4.0300039E-02  | -1.1560890E-02 | 5.4251203E-03  |
| 22 Q32 | -5.2408732E-02 | 4.6416571E-02  | -1.1097462E-02 | 7.2801679E-03  |
| 23 Q33 | -2.7671181E-03 | 1.2484954E-03  | -2.5383750E-02 | 3.9791250E-02  |
| 24 Q34 | -3.8427579E-03 | -3.8102781E-04 | -2.2093885E-02 | -5.2357194E-02 |
| 25 Q35 | 1.3289451E-02  | 2.0080382E-02  | -7.6237966E-03 | 6.3340858E-03  |
| 26 Q36 | 1.5965750E-03  | 7.8752044E-03  | -1.3712235E-02 | 8.3540275E-05  |
| 27 Q37 | -2.1629460E-02 | -3.2350554E-02 | 1.4451416E-03  | -1.3281320E-02 |
| 28 Q38 | -6.6564222E-03 | -1.8172255E-02 | 1.1841267E-02  | -4.2704206E-03 |
| 29 P40 | -2.4600100E-01 | -4.4878237E-01 | 9.0186228E-02  | -2.1754588E-01 |
| 30 P41 | -1.1808976E 00 | -1.2288924E 00 | -2.1681457E-01 | -3.9498149E-02 |
| 31 P42 | -2.0600167E 00 | -1.9797816E 00 | -1.1302834E 00 | -1.0249959E 00 |
| 32 P43 | -2.8818474E 00 | -2.5266570E 00 | -2.3997562E 00 | -1.8999881E 00 |
| 33 P44 | -2.8804065E 00 | -2.5253936E 00 | -2.3985564E 00 | -1.8990381E 00 |
| 34 P45 | -4.0654515E 00 | -3.9848845E 00 | -3.1556565E 00 | -3.0359781E 00 |
| 35 P46 | -5.2505566E 00 | -5.4444499E 00 | -3.9127951E 00 | -4.1729759E 00 |
| 36 P47 | -6.3641511E 00 | -6.8159431E 00 | -4.6242469E 00 | -5.2413656E 00 |
| 37 P48 | -7.4777454E 00 | -8.1874362E 00 | -5.3356989E 00 | -6.3097556E 00 |
| 38 P49 | -0.            | -0.            | 0.             | -0.            |
| 39 P50 | 4.1866658E-01  | 5.9152565E-01  | -9.6917267E-02 | 2.2890454E-01  |
| 40 P51 | -6.6446457E-01 | -5.8037606E-01 | 3.2678350E-01  | 1.6078115E-01  |
| 41 P52 | -1.4537489E 00 | -1.5258805E 00 | -6.9092625E-01 | -7.9397530E-01 |
| 42 P53 | -2.9381362E 00 | -3.3969640E 00 | -1.3596492E 00 | -1.9856417E 00 |
| 43 P54 | -2.4741875E 00 | -2.8605636E 00 | -1.1449528E 00 | -1.6720974E 00 |
| 44 P55 | -3.3318555E 00 | -3.4272336E 00 | -2.4638399E 00 | -2.5810584E 00 |
| 45 P56 | -4.1895694E 00 | -3.9939332E 00 | -3.7827971E 00 | -3.4900680E 00 |
| 46 P57 | -3.9930787E 00 | -3.8066184E 00 | -3.6053840E 00 | -3.3263838E 00 |
| 47 P58 | -4.7608837E 00 | -4.3137203E 00 | -4.7864687E 00 | -4.1402205E 00 |
| 48 P59 | -5.5286891E 00 | -4.8208224E 00 | -5.9675539E 00 | -4.9540573E 00 |
| 49 P60 | -0.            | -0.            | 0.             | -0.            |
| 50 P62 | 1.0451624E 00  | 1.8484871E-01  | 4.8774895E-03  | 5.1816052E-02  |

| (GIM)  | P104           | P105           | P106           | P107           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 1.0449528E 00  | 1.8481167E-01  | 4.8765107E-03  | 5.1805668E-02  |
| 52 P64 | 3.6445572E-01  | -2.3972430E-02 | -6.3254853E-04 | -6.7198837E-03 |
| 53 P67 | -3.4276710E-02 | -4.8253229E-02 | 8.1976435E-02  | 1.1059286E 00  |
| 54 P68 | -3.4269837E-02 | -4.8243563E-02 | 8.1960020E-02  | 1.1057069E 00  |
| 55 P69 | 4.4452536E-03  | 6.2578297E-03  | -1.0631301E-02 | 3.5657510E-01  |
| 56 P72 | -3.8970026E-01 | -4.0229328E-01 | -2.1341213E-01 | -2.0887314E-01 |
| 57 P73 | -3.8962216E-01 | -4.0221268E-01 | -2.1336932E-01 | -2.0883127E-01 |
| 58 P74 | 5.0539172E-02  | 5.2172328E-02  | 2.7676841E-02  | 2.7088192E-02  |
| 59 P77 | 8.4174449E-01  | 7.0317008E-01  | 8.4478747E-01  | 6.4376611E-01  |
| 60 P79 | 5.5482376E-01  | 5.1622233E-01  | 3.9792126E-01  | 3.3369361E-01  |
| 61 P80 | 5.5471256E-01  | 5.1611886E-01  | 3.9784152E-01  | 3.3362674E-01  |
| 62 P81 | -7.1953591E-02 | -6.6947473E-02 | -5.1605331E-02 | -4.3275821E-02 |
| 63 P82 | 8.7608154E-02  | 7.6810353E-02  | 7.2952588E-02  | 5.7759634E-02  |
| 64 P83 | -0.            | -0.            | 0.             | -0.            |
| 65 P84 | -0.            | -0.            | 0.             | -0.            |
| 66 P93 | -6.7711547E-02 | -1.2066744E-02 | -1.1781172E-02 | 3.1574702E-02  |
| 67 P94 | -3.8551206E-01 | -4.0199152E-01 | -3.1240035E-02 | -6.8062240E-02 |
| 68 P95 | -5.0588996E-01 | -5.2711321E-01 | -2.0159386E-01 | -2.1668944E-01 |
| 69 P96 | 3.6804935E 00  | 4.1112516E 00  | 2.5816987E 00  | 3.1745071E 00  |
| 70 P97 | 1.3178730E 00  | 9.1465981E-01  | 8.8506643E-01  | 8.2367005E-01  |
| 71 Q19 | 1.8823924E-02  | 2.7249333E-02  | -4.5721363E-03 | 1.0828026E-02  |
| 72 Q20 | 1.5135301E-02  | 2.6591991E-02  | -5.2139221E-03 | 1.2548075E-02  |
| 73 Q21 | 1.3644752E-02  | -8.9366912E-03 | 6.5412338E-03  | 3.1191834E-03  |
| 74 Q22 | -3.6676048E-03 | -3.0178057E-02 | 5.4812015E-03  | -2.3085936E-03 |
| 75 Q23 | 8.7147810E-03  | -7.7207596E-03 | 2.6518669E-02  | 3.8933961E-03  |
| 76 Q24 | 2.1575004E-03  | -1.4536446E-02 | 1.7239077E-02  | 7.9730682E-04  |
| 77 Q26 | 1.1168536E-02  | -4.2134463E-03 | 2.8267719E-02  | 6.3917100E-03  |
| 78 Q28 | -1.1119154E-02 | -3.1250505E-02 | 2.5868570E-02  | -2.4119931E-03 |

| (GIM)  | P108           | P109           | P110           | P111           |
|--------|----------------|----------------|----------------|----------------|
| 1 01   | -1.3219489E-04 | 1.3493643E-04  | -7.1612885E-06 | -1.3126514E-04 |
| 2 02   | 2.7218263E-02  | -9.4977107E-03 | 5.5529255E-03  | 2.0923826E-02  |
| 3 03   | -7.5902554E-02 | -1.4461338E-02 | 3.1674588E-03  | 1.8865906E-02  |
| 4 04   | -4.4093865E-02 | -4.5744711E-02 | -5.2302489E-02 | -5.7351391E-02 |
| 5 05   | -7.6907471E-02 | -2.9544910E-02 | -5.4929436E-02 | -8.0464375E-02 |
| 6 06   | -7.6907477E-02 | -2.9544913E-02 | -5.4929438E-02 | -8.0464373E-02 |
| 7 07   | -7.6907476E-02 | -2.9544913E-02 | -5.4929438E-02 | -8.0464373E-02 |
| 8 08   | -7.6907476E-02 | -2.9544913E-02 | -5.4929438E-02 | -8.0464373E-02 |
| 9 09   | 3.0366244E-01  | 1.6026972E-01  | 2.1366850E-01  | 2.6756023E-01  |
| 10 010 | 1.2532610E-04  | -1.2792523E-04 | 6.7891524E-06  | 1.2444460E-04  |
| 11 011 | 2.5990902E-02  | -9.3164902E-03 | 5.8212011E-03  | 2.0616018E-02  |
| 12 012 | 3.2871406E-02  | -1.3688466E-02 | 1.5827642E-03  | 1.7919129E-02  |
| 13 013 | 5.2529886E-02  | 5.4726015E-02  | 5.0882737E-02  | 4.6418104E-02  |
| 14 014 | 5.4952956E-02  | 2.9821374E-02  | 4.0685751E-02  | 5.1332850E-02  |
| 15 015 | 5.4952959E-02  | 2.9821374E-02  | 4.0685753E-02  | 5.1332852E-02  |
| 16 016 | 7.4943208E-02  | 8.4451071E-02  | 7.3714271E-02  | 6.2912673E-02  |
| 17 017 | 7.4943212E-02  | 8.4451078E-02  | 7.3714273E-02  | 6.2912675E-02  |
| 18 018 | -2.5260823E-03 | 7.7276883E-04  | -8.1170628E-06 | -1.3931555E-03 |
| 19 025 | -2.8562641E-02 | 2.7820922E-02  | 1.1470182E-03  | -2.3148924E-02 |
| 20 030 | -5.0313196E-02 | -1.1601094E-02 | -2.6778497E-02 | -4.1869836E-02 |
| 21 031 | 2.2595556E-02  | -8.0465395E-03 | 5.0743018E-03  | 1.7906875E-02  |
| 22 032 | 2.4377273E-02  | -8.5644596E-03 | 4.9603621E-03  | 1.8759230E-02  |
| 23 033 | 1.0660617E-02  | -5.3769112E-03 | -2.3301561E-03 | 1.7997528E-03  |
| 24 034 | 1.3502909E-02  | -6.0039522E-03 | -8.9921720E-04 | 2.3915020E-03  |
| 25 035 | 2.0695536E-02  | -2.9202771E-02 | 3.8561674E-02  | 2.5096548E-02  |
| 26 036 | 1.2546286E-02  | -2.7220296E-02 | -4.3454430E-02 | 2.2810963E-02  |
| 27 037 | -2.7967572E-02 | 9.1635487E-03  | -6.4783051E-03 | -2.1783323E-02 |
| 28 038 | -1.9846582E-02 | 1.4593234E-02  | -1.6574073E-03 | -1.8941720E-02 |
| 29 P40 | -5.0804795E-01 | 1.9328799E-01  | -1.3402951E-01 | -4.6001002E-01 |
| 30 P41 | 9.3458065E-02  | -9.3339913E-03 | -3.3511756E-02 | -3.5923208E-02 |
| 31 P42 | -9.0124243E-01 | -3.7238183E-01 | 3.6549731E-02  | 3.6655604E-01  |
| 32 P43 | -1.4147980E 00 | -1.5907759E 00 | -9.3327460E-01 | -2.7611735E-01 |
| 33 P44 | -1.4140905E 00 | -1.5899805E 00 | -9.3280797E-01 | -2.7597922E-01 |
| 34 P45 | -2.9281681E 00 | -2.1716311E 00 | -2.0142038E 00 | -1.8600813E 00 |
| 35 P46 | -4.4423223E 00 | -2.7533114E 00 | -3.0956546E 00 | -3.4442639E 00 |
| 36 P47 | -5.8651104E 00 | -3.2998922E 00 | -4.1118491E 00 | -4.9328547E 00 |
| 37 P48 | -7.2878983E 00 | -3.8464733E 00 | -5.1280438E 00 | -6.4214457E 00 |
| 38 P49 | -0.            | 0.             | 0.             | -0.            |
| 39 P50 | 5.6217006E-01  | -1.9957794E-01 | 1.5298997E-01  | 5.0705987E-01  |
| 40 P51 | -3.6925659E-02 | 1.7431964E-02  | 1.7612579E-02  | 4.5252246E-02  |
| 41 P52 | -8.7462183E-01 | 3.9387362E-01  | 4.7614498E-02  | -3.6591954E-01 |
| 42 P53 | -2.6081246E 00 | -1.8127239E-01 | -1.0155785E 00 | -1.8530435E 00 |
| 43 P54 | -2.1962866E 00 | -1.5264858E-01 | -8.5521278E-01 | -1.5604372E 00 |
| 44 P55 | -2.7054444E 00 | -1.6574548E 00 | -1.8248945E 00 | -1.9954327E 00 |
| 45 P56 | -3.2146293E 00 | -3.1623415E 00 | -2.7946279E 00 | -2.4304515E 00 |
| 46 P57 | -3.0638631E 00 | -3.0140276E 00 | -2.6635600E 00 | -2.3164634E 00 |
| 47 P58 | -3.5195183E 00 | -4.3617523E 00 | -3.5318717E 00 | -2.7057558E 00 |
| 48 P59 | -3.9751737E 00 | -5.7094769E 00 | -4.4001836E 00 | -3.0950483E 00 |
| 49 P60 | -0.            | 0.             | 0.             | -0.            |
| 50 P62 | 6.0625975E-02  | -1.8546452E-02 | 1.9480920E-04  | 3.3435733E-02  |

| (GIM)  | P108           | P109           | P110           | P111           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 6.0613826E-02  | -1.8542736E-02 | 1.9477049E-04  | 3.3429033E-02  |
| 52 P64 | -7.8624188E-03 | 2.4052392E-03  | -2.5264282E-05 | -4.3361898E-03 |
| 53 P67 | 9.2838231E-02  | -2.2524312E-02 | 4.1539373E-02  | 1.9044725E-02  |
| 54 P68 | 9.2819622E-02  | -2.2519795E-02 | 4.1531048E-02  | 1.9040907E-02  |
| 55 P69 | -1.2039840E-02 | 2.9211173E-03  | -5.3871288E-03 | -2.4698590E-03 |
| 56 P72 | -2.6334630E-01 | 4.6622228E-02  | 1.0825490E 00  | -5.9934992E-02 |
| 57 P73 | -2.6329354E-01 | 4.6612893E-02  | 1.0823321E 00  | -5.9922987E-02 |
| 58 P74 | 3.4152670E-02  | -6.0463108E-03 | 3.5960713E-01  | 7.7729072E-03  |
| 59 P77 | 4.4726837E-01  | 6.9368324E-01  | 4.3926777E-01  | 1.8943395E-01  |
| 60 P79 | 2.8840258E-01  | 2.1431007E-01  | 1.7901224E-01  | 9.1663581E-02  |
| 61 P80 | 2.8834477E-01  | 2.1426712E-01  | 1.7897637E-01  | 9.1645215E-02  |
| 62 P81 | -3.7402147E-02 | -2.7793292E-02 | -2.3215613E-02 | -1.1887601E-02 |
| 63 P82 | 4.3009852E-02  | 4.8359587E-02  | 2.8371548E-02  | 8.3939631E-03  |
| 64 P83 | -0.            | 0.             | 0.             | -0.            |
| 65 P84 | -0.            | 0.             | 0.             | -0.            |
| 66 P93 | 5.5881917E-02  | -3.0514164E-02 | 1.1712523E-02  | 5.1862962E-02  |
| 67 P94 | -5.0441559E-02 | -3.4878612E-03 | 1.5535777E-02  | 5.1708147E-04  |
| 68 P95 | -2.6414512E-01 | 4.7356707E-02  | -5.6065879E-02 | -5.9491770E-02 |
| 69 P96 | 3.7676424E 00  | 1.8791649E 00  | 2.6591195E 00  | 3.4454436E 00  |
| 70 P97 | 7.5145213E-01  | 8.1167954E-01  | 7.1510716E-01  | 6.2376655E-01  |
| 71 Q19 | 2.6423404E-02  | -9.4640971E-03 | 7.1635952E-03  | 2.3844491E-02  |
| 72 Q20 | 2.9467602E-02  | -1.1126373E-02 | 7.8016413E-03  | 2.6669754E-02  |
| 73 Q21 | -2.0345412E-03 | 8.3514117E-04  | -5.1169502E-04 | -9.8714639E-04 |
| 74 Q22 | -7.8265709E-03 | 2.3074138E-03  | -3.0342118E-04 | -3.7842414E-03 |
| 75 Q23 | -6.3119102E-03 | 3.9196270E-03  | 2.9861062E-03  | -1.3130698E-03 |
| 76 Q24 | -1.7952869E-02 | 6.6892558E-03  | -9.1421226E-04 | -4.5818996E-03 |
| 77 Q26 | -1.4173191E-02 | 2.5241140E-02  | 4.2012377E-03  | -1.9908078E-02 |
| 78 Q28 | -3.0302617E-02 | 4.3032263E-02  | 6.2603801E-03  | -3.0272994E-02 |

| (GIM)  | P112           | P113           | P114           | P115           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 1.7318083E-04  | 1.5101992E-04  | 2.3596498E-05  | -1.2554985E-04 |
| 2 Q2   | -1.5206610E-02 | -1.2329985E-02 | 2.4913987E-03  | 1.8295807E-02  |
| 3 Q3   | -1.2440567E-02 | -1.0458947E-02 | 3.3939548E-04  | 1.3975480E-02  |
| 4 Q4   | -3.1782121E-02 | -2.8049050E-02 | -6.4173098E-04 | 2.7740302E-02  |
| 5 Q5   | -1.4709299E-02 | -1.9971226E-02 | -5.1107901E-02 | -8.4066720E-02 |
| 6 Q6   | -1.4709301E-02 | -1.9971228E-02 | -5.1107902E-02 | -8.4066719E-02 |
| 7 Q7   | -1.4709301E-02 | -1.9971228E-02 | -5.1107903E-02 | -8.4066719E-02 |
| 8 Q8   | -1.4709301E-02 | -1.9971228E-02 | -5.1107903E-02 | -8.4066719E-02 |
| 9 Q9   | 8.9883248E-02  | 1.0163856E-01  | 1.6506833E-01  | 2.2981524E-01  |
| 10 Q10 | -1.6418245E-04 | -1.4317300E-04 | -2.2370477E-05 | 1.1902625E-04  |
| 11 Q11 | -1.5069142E-02 | -1.2192823E-02 | 2.5520810E-03  | 1.8076078E-02  |
| 12 Q12 | -1.1693964E-02 | -9.3749956E-03 | 1.9014959E-03  | 1.3257051E-02  |
| 13 Q13 | -3.3586739E-02 | -3.0091456E-02 | -2.2961866E-03 | 2.9522515E-02  |
| 14 Q14 | 1.8961427E-02  | 2.7234289E-02  | 4.3945121E-02  | 4.6371754E-02  |
| 15 Q15 | 1.8961425E-02  | 2.7234297E-02  | 4.3945122E-02  | 4.6371756E-02  |
| 16 Q16 | 7.9276812E-02  | 8.0001726E-02  | 6.9231201E-02  | 5.0540813E-02  |
| 17 Q17 | 7.9276810E-02  | 8.0001736E-02  | 6.9231203E-02  | 5.0540814E-02  |
| 18 Q18 | 1.0378490E-03  | 8.7966411E-04  | -2.2653250E-05 | -1.1869731E-03 |
| 19 Q25 | 1.6717698E-02  | 1.5772068E-02  | 3.6495695E-03  | -1.3221412E-02 |
| 20 Q30 | 8.7468158E-03  | 2.6562554E-03  | -1.8306744E-02 | -3.3219282E-02 |
| 21 Q31 | -1.3042261E-02 | -1.0546242E-02 | 2.2407811E-03  | 1.5694391E-02  |
| 22 Q32 | -1.3684356E-02 | -1.1102629E-02 | 2.2079966E-03  | 1.6410129E-02  |
| 23 Q33 | -1.6926155E-04 | -6.6027743E-05 | -3.5799007E-05 | -4.2581209E-04 |
| 24 Q34 | -6.7858143E-04 | -8.6023706E-04 | -1.3055502E-03 | -1.1145079E-05 |
| 25 Q35 | -1.8937493E-02 | -1.7641047E-02 | -2.9474212E-03 | 1.4823581E-02  |
| 26 Q36 | -1.7413906E-02 | -1.5694215E-02 | -7.2127891E-04 | 1.3248316E-02  |
| 27 Q37 | 1.5705720E-02  | 4.4290605E-03  | 3.5351382E-02  | -9.6841835E-03 |
| 28 Q38 | 1.3852016E-02  | 7.4099461E-03  | -3.4615958E-02 | -9.2701323E-03 |
| 29 P40 | 3.3439398E-01  | 2.7128325E-01  | -6.0367101E-02 | -4.0571731E-01 |
| 30 P41 | 2.4579204E-02  | 1.9271102E-02  | -1.5414807E-02 | -3.6746432E-02 |
| 31 P42 | -2.3389716E-01 | -2.0807128E-01 | -4.8563725E-02 | 2.4033302E-01  |
| 32 P43 | -1.0342923E 00 | -9.1448021E-01 | -5.8302947E-02 | 9.0548296E-01  |
| 33 P44 | -1.0337752E 00 | -9.1402299E-01 | -5.8273811E-02 | 9.0503024E-01  |
| 34 P45 | -1.3233571E 00 | -1.3071965E 00 | -1.0644350E 00 | -7.4999136E-01 |
| 35 P46 | -1.6129539E 00 | -1.7003901E 00 | -2.0706474E 00 | -2.4050969E 00 |
| 36 P47 | -1.8850759E 00 | -2.0698577E 00 | -3.0161436E 00 | -3.9603313E 00 |
| 37 P48 | -2.1571980E 00 | -2.4393255E 00 | -3.9616399E 00 | -5.5155655E 00 |
| 38 P49 | 0.             | 0.             | 0.             | -0.            |
| 39 P50 | -3.5545765E-01 | -2.8659348E-01 | 7.3438668E-02  | 4.4556217E-01  |
| 40 P51 | -1.3108997E-02 | -1.0248377E-02 | 1.6820045E-02  | 4.0483234E-02  |
| 41 P52 | 2.3971184E-01  | 1.8237684E-01  | -5.2832873E-02 | -2.3728794E-01 |
| 42 P53 | 1.3150622E 00  | 1.1627945E 00  | 7.4268676E-02  | -1.1510185E 00 |
| 43 P54 | 1.1074063E 00  | 9.7918249E-01  | 6.2541198E-02  | -9.6926595E-01 |
| 44 P55 | -7.1063893E-01 | -7.2808955E-01 | -9.8945875E-01 | -1.3273263E 00 |
| 45 P56 | -2.5287812E 00 | -2.4354526E 00 | -2.0415148E 00 | -1.6854058E 00 |
| 46 P57 | -2.4101813E 00 | -2.3212299E 00 | -1.9457677E 00 | -1.6063602E 00 |
| 47 P58 | -4.0386184E 00 | -3.8504025E 00 | -2.8878701E 00 | -1.9268085E 00 |
| 48 P59 | -5.6670555E 00 | -5.3795754E 00 | -3.8299726E 00 | -2.2472569E 00 |
| 49 P60 | 0.             | 0.             | 0.             | -0.            |
| 50 P62 | -2.4908376E-02 | -2.1111938E-02 | 5.4367788E-04  | 2.8487353E-02  |



| (GIM)  | P112           | P113           | P114           | P115           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | -2.4903385E-02 | -2.1107708E-02 | 5.4356899E-04  | 2.8481645E-02  |
| 52 P64 | 3.2303000E-03  | 2.7379502E-03  | -7.0508125E-05 | -3.6944478E-03 |
| 53 P67 | -1.5459831E-02 | -2.3973647E-02 | -3.8281017E-02 | 1.2206042E-02  |
| 54 P68 | -1.5456733E-02 | -2.3968842E-02 | -3.8273346E-02 | 1.2203596E-02  |
| 55 P69 | 2.0049438E-03  | 3.1090775E-03  | 4.9645615E-03  | -1.5829687E-03 |
| 56 P72 | 3.8360024E-02  | 5.3748826E-02  | 7.3891699E-02  | -4.3073895E-02 |
| 57 P73 | 3.8352337E-02  | 5.3738054E-02  | 7.3876890E-02  | -4.3085260E-02 |
| 58 P74 | -4.9748074E-03 | -6.9705397E-03 | -9.5828146E-03 | 5.5887308E-03  |
| 59 P77 | -1.2834634E-01 | 4.1582084E-01  | 7.7151393E-02  | -3.2539144E-02 |
| 60 P79 | -5.8642328E-02 | 1.1719256E-01  | 1.2121219E 00  | 8.3364844E-03  |
| 61 P80 | -5.8630574E-02 | 1.1716908E-01  | 1.2118789E 00  | 8.3348117E-03  |
| 62 P81 | 7.6051648E-03  | -1.5198386E-02 | 3.4280320E-01  | -1.0811353E-03 |
| 63 P82 | 3.1442487E-02  | 2.7800199E-02  | 1.7725099E-03  | 4.7247332E-01  |
| 64 P83 | 0.             | 0.             | 0.             | -2.4999999E-09 |
| 65 P84 | 0.             | 0.             | 0.             | 2.5000000E-09  |
| 66 P93 | -4.6201989E-02 | -3.8632747E-02 | 2.3429617E-03  | 4.6810757E-02  |
| 67 P94 | -1.1361091E-02 | -8.9273801E-03 | 1.7722690E-03  | 4.0803105E-03  |
| 68 P95 | 3.4278526E-02  | 4.8910927E-02  | 6.8358644E-02  | -4.0547897E-02 |
| 69 P96 | 1.0354663E 00  | 1.2039369E 00  | 2.1401447E 00  | 3.1074313E 00  |
| 70 P97 | 7.5891789E-01  | 7.6748396E-01  | 6.7176238E-01  | 5.0175954E-01  |
| 71 Q19 | -1.6792341E-02 | -1.3549895E-02 | 3.4130594E-03  | 2.0962237E-02  |
| 72 Q20 | -1.9309220E-02 | -1.5654435E-02 | 3.5406936E-03  | 2.3512278E-02  |
| 73 Q21 | 9.4578415E-04  | 7.3448437E-04  | -9.6514410E-05 | -8.7334279E-04 |
| 74 Q22 | 2.8437611E-03  | 2.3527005E-03  | -1.2760321E-04 | -3.2011072E-03 |
| 75 Q23 | 1.3175482E-04  | -3.6493373E-04 | -1.3565248E-03 | 2.6427836E-04  |
| 76 Q24 | 2.6178571E-03  | 2.7856612E-03  | 2.2705990E-03  | -2.1667300E-03 |
| 77 Q26 | 1.4850356E-02  | 1.3107619E-02  | -7.4305346E-05 | -1.1012543E-02 |
| 78 Q28 | 6.9057346E-02  | 5.5421510E-02  | 6.9863593E-03  | -2.9036638E-02 |

| (GIM)  | P116           | P117           | P118           | P119           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 1.0749551E-04  | -9.5469091E-05 | 6.6146677E-05  | 6.0649981E-05  |
| 2 Q2   | -9.2205374E-03 | 1.3110016E-02  | -6.2880572E-03 | -5.4540212E-03 |
| 3 Q3   | -6.1684319E-03 | 8.8467230E-03  | -3.6560478E-03 | -3.2017154E-03 |
| 4 Q4   | -1.3984365E-02 | 1.5538380E-02  | -6.8048065E-03 | -6.2710702E-03 |
| 5 Q5   | -1.2679698E-02 | 1.1665807E-02  | -3.5956099E-03 | -5.7136820E-03 |
| 6 Q6   | -1.2679719E-02 | -8.9344294E-02 | -3.5956103E-03 | -5.7136822E-03 |
| 7 Q7   | -1.2679739E-02 | -8.9344313E-02 | -3.5956199E-03 | -5.7136918E-03 |
| 8 Q8   | -1.2679739E-02 | -8.9344333E-02 | -3.5956199E-03 | -5.7136918E-03 |
| 9 Q9   | 5.8469168E-02  | 1.8101407E-01  | 1.9874538E-02  | 2.5968803E-02  |
| 10 Q10 | -1.0191009E-04 | 9.0508547E-05  | -6.2709718E-05 | -5.7498626E-05 |
| 11 Q11 | -9.1440501E-03 | 1.2972120E-02  | -6.2559010E-03 | -5.4189286E-03 |
| 12 Q12 | -5.4578677E-03 | 8.3194623E-03  | -3.4650029E-03 | -2.8796608E-03 |
| 13 Q13 | -1.5092596E-02 | 1.6606423E-02  | -7.1443142E-03 | -6.7375655E-03 |
| 14 Q14 | -4.8402449E-02 | 3.3614788E-02  | -5.1276468E-03 | -1.9508983E-02 |
| 15 Q15 | 5.4690331E-02  | 3.3614789E-02  | -5.1276474E-03 | -1.9508963E-02 |
| 16 Q16 | 8.3819230E-02  | 3.4144337E-02  | 6.1109168E-02  | 8.5401164E-02  |
| 17 Q17 | 8.3819249E-02  | 3.4144359E-02  | 6.1109169E-02  | 8.5401164E-02  |
| 18 Q18 | 6.2630525E-04  | -8.3987222E-04 | 3.9889768E-04  | 3.5709251E-04  |
| 19 Q25 | 7.0777547E-03  | -6.6393480E-03 | 2.5960342E-03  | 2.7306116E-03  |
| 20 Q30 | 6.3112586E-03  | -2.2226284E-02 | 3.8317974E-02  | 1.1855103E-02  |
| 21 Q31 | -7.9126711E-03 | 1.1259683E-02  | -5.4179204E-03 | -4.6910357E-03 |
| 22 Q32 | -8.2991450E-03 | 1.1762419E-02  | -5.6550174E-03 | -4.9070905E-03 |
| 23 Q33 | 1.2344870E-03  | -1.2805207E-03 | 1.0641582E-03  | 1.0211803E-03  |
| 24 Q34 | 7.3514484E-04  | -9.8163942E-04 | 9.6050199E-04  | 8.0758507E-04  |
| 25 Q35 | -8.3855389E-03 | 7.8105791E-03  | -3.4300664E-03 | -3.4722440E-03 |
| 26 Q36 | -7.2275461E-03 | 6.7833504E-03  | -3.1072743E-03 | -2.9684406E-03 |
| 27 Q37 | -8.4586639E-04 | -3.0978477E-03 | 3.3103216E-03  | -1.8201704E-04 |
| 28 Q38 | 1.7275803E-03  | -3.6232512E-03 | 2.5775749E-03  | 7.2114732E-04  |
| 29 P40 | 2.0592473E-01  | -2.9293257E-01 | 1.4097510E-01  | 1.2250221E-01  |
| 30 P41 | 1.9389862E-02  | -2.9569268E-02 | 1.4618509E-02  | 1.2743595E-02  |
| 31 P42 | -1.0067615E-01 | 1.3508350E-01  | -4.6900531E-02 | -4.3751945E-02 |
| 32 P43 | -4.3506373E-01 | 4.9099331E-01  | -2.0247506E-01 | -1.8696193E-01 |
| 33 P44 | -4.3484620E-01 | 4.9074780E-01  | -2.0237383E-01 | -1.8686844E-01 |
| 34 P45 | -6.8447141E-01 | 7.2041251E-01  | -2.7316059E-01 | -2.9935370E-01 |
| 35 P46 | -9.3410971E-01 | -1.0385978E-00 | -3.4395097E-01 | -4.1184468E-01 |
| 36 P47 | -1.1686849E-00 | -2.6914677E-00 | -4.1046993E-01 | -5.1754797E-01 |
| 37 P48 | -1.4032601E-00 | -4.3443379E-00 | -4.7698891E-01 | -6.2325128E-01 |
| 38 P49 | 0.             | -0.            | 0.             | 0.             |
| 39 P50 | -2.1875274E-01 | 3.2088654E-01  | -1.5101485E-01 | -1.3069064E-01 |
| 40 P51 | -1.2316851E-02 | 3.0508175E-02  | -9.5697565E-03 | -8.4398052E-03 |
| 41 P52 | 7.9264378E-02  | -1.2718159E-01 | 4.9198167E-02  | 3.5317068E-02  |
| 42 P53 | 5.5319662E-01  | -6.2410296E-01 | 2.5741614E-01  | 2.3771688E-01  |
| 43 P54 | 4.6584365E-01  | -5.2555348E-01 | 2.1676863E-01  | 2.0017999E-01  |
| 44 P55 | 7.3364855E-01  | -7.7191229E-01 | 2.9279405E-01  | 3.2083680E-01  |
| 45 P56 | -1.1280477E-00 | -1.0182843E-00 | 3.6882355E-01  | 4.4149961E-01  |
| 46 P57 | -1.0751423E-00 | -9.7052671E-01 | 3.5152569E-01  | 4.2079332E-01  |
| 47 P58 | -2.7425564E-00 | -1.1910107E-00 | -1.4878764E-00 | -1.3784476E-00 |
| 48 P59 | -4.4099710E-00 | -1.4114951E-00 | -3.3272786E-00 | -3.1776886E-00 |
| 49 P60 | 0.             | -0.            | 0.             | 0.             |
| 50 P62 | -1.5031326E-02 | 2.0156933E-02  | -9.5735444E-03 | -8.5702202E-03 |

| (GIM)  | P116           | P117           | P118           | P119           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | -1.5028314E-02 | 2.0152894E-02  | -9.5716259E-03 | -8.5685029E-03 |
| 52 P64 | 1.9493720E-03  | -2.6140981E-03 | 1.2415671E-03  | 1.1114487E-03  |
| 53 P67 | -1.4211018E-02 | 8.1401594E-03  | -2.4042929E-03 | -5.7457196E-03 |
| 54 P68 | -1.4208170E-02 | 8.1385282E-03  | -2.4038115E-03 | -5.7445684E-03 |
| 55 P69 | 1.8429884E-03  | -1.0556753E-03 | 3.1180624E-04  | 7.4514680E-04  |
| 56 P72 | 3.3491333E-02  | -2.9440928E-02 | 8.5471961E-03  | 1.4697984E-02  |
| 57 P73 | 3.3484620E-02  | -2.9435026E-02 | 8.5454826E-03  | 1.4695037E-02  |
| 58 P74 | -4.3434004E-03 | 3.8181141E-03  | -1.1084627E-03 | -1.9061417E-03 |
| 59 P77 | 3.3097090E-01  | -1.0488778E-01 | -6.6806868E-02 | 1.1931942E-01  |
| 60 P79 | 9.7572964E-02  | -2.2442685E-02 | -2.5415480E-02 | 3.4334387E-02  |
| 61 P80 | 9.7553411E-02  | -2.2438189E-02 | -2.5410386E-02 | 3.4327506E-02  |
| 62 P81 | -1.2653973E-02 | 2.9105317E-03  | 3.2960644E-03  | -4.4527335E-03 |
| 63 P82 | 1.3225938E-02  | -1.4926197E-02 | 6.1552418E-03  | 5.6836426E-03  |
| 64 P83 | 0.             | -0.            | -1.0375000E-07 | -1.0375000E-07 |
| 65 P84 | 0.             | -0.            | -9.6249996E-08 | -9.6249996E-08 |
| 66 P93 | -2.8544595E-02 | 3.4324940E-02  | -1.8727634E-02 | -1.6620300E-02 |
| 67 P94 | -7.7207608E-03 | 4.5436299E-03  | -5.6416441E-03 | -4.8571904E-03 |
| 68 P95 | 2.9005519E-02  | -2.6466455E-02 | 6.1823244E-03  | 1.2078959E-02  |
| 69 P96 | 7.0437419E-01  | 2.6765484E-00  | 2.3235456E-01  | 3.1365670E-01  |
| 70 P97 | 8.0697161E-01  | 3.3934704E-01  | 5.8888960E-01  | 8.2492745E-01  |
| 71 Q19 | -1.0335071E-02 | 1.5101445E-02  | -7.1271206E-03 | -6.1711515E-03 |
| 72 Q20 | -1.1890054E-02 | 1.6971315E-02  | -8.1473187E-03 | -7.0765514E-03 |
| 73 Q21 | 5.1293297E-04  | -6.1165572E-04 | 3.6084058E-04  | 2.9991318E-04  |
| 74 Q22 | 1.6473227E-03  | -2.2340089E-03 | 1.0737070E-03  | 9.4071500E-04  |
| 75 Q23 | -1.1741463E-03 | 9.4350885E-04  | -7.1612670E-04 | -8.3292850E-04 |
| 76 Q24 | 8.2642457E-04  | -7.4568685E-04 | -7.2046028E-05 | 8.9625278E-05  |
| 77 Q26 | 5.4976631E-03  | -5.1975730E-03 | 2.2592486E-03  | 2.0726037E-03  |
| 78 Q28 | 3.5436957E-02  | -2.1687584E-02 | 1.4469554E-03  | 1.3667510E-02  |

| (GIM)  | P120           | P121           | P122           | P123           |
|--------|----------------|----------------|----------------|----------------|
| 1 Q1   | 1.8016181E-06  | 1.4519260E-06  | -5.7001190E-05 | 2.1858894E-05  |
| 2 Q2   | 1.0945878E-03  | -1.6003416E-04 | 7.5760115E-03  | -1.9735820E-03 |
| 3 Q3   | 7.7420868E-04  | -9.7522056E-05 | 4.7238793E-03  | -1.0711071E-03 |
| 4 Q4   | 6.1957859E-04  | -1.7076509E-04 | 7.5355824E-03  | -1.9143949E-03 |
| 5 Q5   | 6.5862172E-05  | -1.6092587E-04 | 6.5833521E-03  | -2.1089805E-03 |
| 6 Q6   | 6.5842301E-05  | -1.6094607E-04 | 6.5833530E-03  | -2.1089807E-03 |
| 7 Q7   | -4.9807914E-02 | 1.1016703E-03  | -9.4426751E-02 | -2.1089807E-03 |
| 8 Q8   | -4.9807914E-02 | 1.1016703E-03  | -9.4426770E-02 | -2.1090008E-03 |
| 9 Q9   | 7.5777346E-02  | -1.2188799E-03 | 1.2514446E-01  | 8.9983159E-03  |
| 10 Q10 | -1.7080183E-06 | -1.3764845E-06 | 5.4039410E-05  | -2.0723117E-05 |
| 11 Q11 | 1.0766256E-03  | -1.5867078E-04 | 7.5028304E-03  | -1.9618407E-03 |
| 12 Q12 | 8.0282779E-04  | -8.9189711E-05 | 4.4150400E-03  | -9.5013438E-04 |
| 13 Q13 | 6.3630667E-04  | -1.8387444E-04 | 8.0832380E-03  | -2.0713664E-03 |
| 14 Q14 | -2.2050752E-03 | -5.3726382E-04 | 1.9553972E-02  | -7.5575574E-03 |
| 15 Q15 | -2.2050548E-03 | -5.3724322E-04 | 1.9553973E-02  | -7.5575578E-03 |
| 16 Q16 | 5.5986729E-02  | 9.1224426E-04  | 1.9042222E-02  | -6.5526170E-03 |
| 17 Q17 | 5.5986729E-02  | 9.1224425E-04  | 1.9042243E-02  | 9.6540163E-02  |
| 18 Q18 | -6.2874655E-05 | 1.0343699E-05  | -4.8179680E-04 | 1.2820738E-04  |
| 19 Q25 | -2.7794634E-05 | 7.0761288E-05  | -2.8236240E-03 | 7.6317106E-04  |
| 20 Q30 | -3.7307120E-03 | 2.1206073E-04  | -1.2319326E-02 | 4.3992110E-03  |
| 21 Q31 | 9.4037567E-04  | -1.3755314E-04 | 6.5113114E-03  | -1.6983775E-03 |
| 22 Q32 | 9.7568010E-04  | -1.4377151E-04 | 6.7984611E-03  | -1.7756132E-03 |
| 23 Q33 | -1.4564075E-05 | 2.5924925E-05  | -1.0645240E-03 | 4.4513216E-04  |
| 24 Q34 | -5.2292947E-05 | 2.0714320E-05  | -8.9122536E-04 | 3.6516781E-04  |
| 25 Q35 | 3.0815670E-06  | -8.8273876E-05 | 3.5781691E-03  | -1.0278243E-03 |
| 26 Q36 | 6.6813411E-06  | -7.4362035E-05 | 3.0183399E-03  | -8.4753454E-04 |
| 27 Q37 | -8.2666354E-04 | -7.7690292E-06 | -5.1205623E-04 | -4.8298432E-04 |
| 28 Q38 | -4.2874804E-04 | 1.6307128E-05  | -1.0892051E-03 | -4.0643237E-05 |
| 29 P40 | -2.4476397E-02 | 3.5935462E-03  | -1.7001588E-01 | 4.4507863E-02  |
| 30 P41 | -2.7761014E-03 | 3.7996933E-04  | -1.8164929E-02 | 4.8846437E-03  |
| 31 P42 | 1.0728286E-02  | -1.3575217E-03 | 6.5708305E-02  | -1.3055341E-02 |
| 32 P43 | 2.1654460E-02  | -5.1744157E-03 | 2.3121893E-01  | -5.4913374E-02 |
| 33 P44 | 2.1643642E-02  | -5.1718286E-03 | 2.3110333E-01  | -5.4885921E-02 |
| 34 P45 | 2.2940271E-02  | -8.3399762E-03 | 3.6070979E-01  | -9.6405420E-02 |
| 35 P46 | 2.4236582E-02  | -1.1508683E-02 | 4.9032286E-01  | -1.3792703E-01 |
| 36 P47 | -8.9720982E-01 | 8.8722161E-03  | -1.2565720E 00 | -1.7694317E-01 |
| 37 P48 | -1.8186563E 00 | 2.9253116E-02  | -3.0034673E 00 | -2.1595969E-01 |
| 38 P49 | 0.             | 0.             | -9.9999998E-08 | -9.9999998E-08 |
| 39 P50 | 2.8464301E-02  | -3.8890347E-03 | 1.8597123E-01  | -4.7512749E-02 |
| 40 P51 | 4.8344030E-03  | -3.2825758E-04 | 1.8129023E-02  | -3.3144121E-03 |
| 41 P52 | -1.3284362E-02 | 1.1346661E-03  | -5.9238811E-02 | 9.2277244E-03  |
| 42 P53 | -2.7480753E-02 | 6.5779760E-03  | -2.9388955E-01 | 6.9821212E-02  |
| 43 P54 | -2.3141394E-02 | 5.5392755E-03  | -2.4748268E-01 | 5.8796033E-02  |
| 44 P55 | -2.4518904E-02 | 8.9365730E-03  | -3.8645057E-01 | 1.0331297E-01  |
| 45 P56 | -2.5896874E-02 | 1.2333627E-02  | -5.2542587E-01 | 1.4783227E-01  |
| 46 P57 | -2.4682313E-02 | 1.1755179E-02  | -5.0078340E-01 | 1.4089894E-01  |
| 47 P58 | -9.9141861E-01 | -9.0444622E-03 | -6.2515697E-01 | 1.8073695E-01  |
| 48 P59 | -1.9581550E 00 | -2.9844103E-02 | -7.4953094E-01 | -1.6866415E 00 |
| 49 P60 | 0.             | 0.             | -0.            | -9.9999998E-08 |
| 50 P62 | 1.5089917E-03  | -2.4824878E-04 | 1.1563123E-02  | -3.0770772E-03 |

| (GIM)  | P120           | P121           | P122           | P123           |
|--------|----------------|----------------|----------------|----------------|
| 51 P63 | 1.5086893E-03  | -2.4819904E-04 | 1.1560806E-02  | -3.0764605E-03 |
| 52 P64 | -1.9569705E-04 | 3.2194713E-05  | -1.4995901E-03 | 3.9905780E-04  |
| 53 P67 | -1.1465857E-03 | -1.3948087E-04 | 4.5023281E-03  | -2.1086041E-03 |
| 54 P68 | -1.1463560E-03 | -1.3945292E-04 | 4.5014261E-03  | -2.1081817E-03 |
| 55 P69 | 1.4869760E-04  | 1.8088896E-05  | -5.8389474E-04 | 2.7345916E-04  |
| 56 P72 | 1.2515011E-04  | 4.1135514E-04  | -1.6534716E-02 | 5.4147700E-03  |
| 57 P73 | 1.2512498E-04  | 4.1127270E-04  | -1.6531402E-02 | 5.4136846E-03  |
| 58 P74 | -1.6230381E-05 | -5.3347536E-05 | 2.1443425E-03  | -7.0222687E-04 |
| 59 P77 | 4.2747338E-02  | 3.2222871E-03  | -8.7753130E-02 | 5.5420082E-02  |
| 60 P79 | 1.4550506E-02  | 9.1296587E-04  | -2.2423880E-02 | 1.6511177E-02  |
| 61 P80 | 1.4547591E-02  | 9.1278287E-04  | -2.2419386E-02 | 1.6507870E-02  |
| 62 P81 | -1.8870154E-03 | -1.1840008E-04 | 2.9080924E-03  | -2.1412900E-03 |
| 63 P82 | -6.5829600E-04 | 1.5730224E-04  | -7.0290557E-03 | 1.6693666E-03  |
| 64 P83 | -5.0624998E-01 | -1.2500101E-02 | -0.            | 0.             |
| 65 P84 | -4.9374998E-01 | 1.2499901E-02  | -0.            | 0.             |
| 66 P93 | 1.7989909E-03  | -4.5177550E-04 | 2.0095944E-02  | -6.0192253E-03 |
| 67 P94 | -7.8822271E-04 | -9.7602212E-05 | 3.1646099E-03  | -1.8118338E-03 |
| 68 P95 | -1.9814195E-04 | 3.5148211E-04  | -1.4433174E-02 | 4.3843644E-03  |
| 69 P96 | 1.2432940E 00  | -2.2973446E-02 | 2.1737552E 00  | 1.0996244E-01  |
| 70 P97 | 5.4368112E-01  | 8.7484342E-03  | 1.8938318E-01  | 9.3519597E-01  |
| 71 Q19 | 1.3298400E-03  | -1.8330389E-04 | 8.7536951E-03  | -2.2433495E-03 |
| 72 Q20 | 1.4278410E-03  | -2.0791460E-04 | 9.8484328E-03  | -2.5712501E-03 |
| 73 Q21 | -2.8770905E-05 | 7.9008666E-06  | -3.4875684E-04 | 1.0573880E-04  |
| 74 Q22 | -1.6971078E-04 | 2.7194650E-05  | -1.2711006E-03 | 3.3493876E-04  |
| 75 Q23 | -4.4678710E-05 | -2.0761310E-05 | 7.9615208E-04  | -3.6347426E-04 |
| 76 Q24 | -1.2535558E-05 | 3.7014190E-06  | -1.6244251E-04 | -2.5952093E-05 |
| 77 Q26 | -1.7006743E-05 | 5.1614107E-05  | -2.1073691E-03 | 5.2433041E-04  |
| 78 Q28 | 2.2717658E-03  | 3.7278722E-04  | -1.2825987E-02 | 5.4023169E-03  |

| (GIM)  | P124           | P125 | P126 |
|--------|----------------|------|------|
| 1 Q1   | -2.3797264E-05 | -0.  | -0.  |
| 2 Q2   | 3.1054347E-03  | -0.  | -0.  |
| 3 Q3   | 1.8446931E-03  | -0.  | -0.  |
| 4 Q4   | 2.7482700E-03  | 0.   | 0.   |
| 5 Q5   | 2.6612479E-03  | 0.   | 0.   |
| 6 Q6   | 2.6612483E-03  | 0.   | 0.   |
| 7 Q7   | 2.6612481E-03  | 0.   | 0.   |
| 8 Q8   | -7.8348854E-02 | 0.   | 0.   |
| 9 Q9   | 6.5961948E-02  | -0.  | -0.  |
| 10 Q10 | 2.2560765E-05  | -0.  | -0.  |
| 11 Q11 | 3.0769727E-03  | -0.  | -0.  |
| 12 Q12 | 1.7171205E-03  | -0.  | -0.  |
| 13 Q13 | 2.9563494E-03  | -0.  | -0.  |
| 14 Q14 | 8.0456005E-03  | 0.   | 0.   |
| 15 Q15 | 8.0456007E-03  | 0.   | 0.   |
| 16 Q16 | 7.6429113E-03  | 0.   | 0.   |
| 17 Q17 | 7.6429115E-03  | 0.   | 0.   |
| 18 Q18 | -1.9665737E-04 | -0.  | -0.  |
| 19 Q25 | -7.6361332E-04 | -0.  | -0.  |
| 20 Q30 | -4.9259323E-03 | -0.  | -0.  |
| 21 Q31 | 2.6700885E-03  | -0.  | -0.  |
| 22 Q32 | 2.7869969E-03  | -0.  | -0.  |
| 23 Q33 | -5.1291427E-04 | -0.  | -0.  |
| 24 Q34 | -4.4174122E-04 | -0.  | -0.  |
| 25 Q35 | 1.2460313E-03  | -0.  | -0.  |
| 26 Q36 | 1.0245261E-03  | -0.  | -0.  |
| 27 Q37 | 9.1632042E-05  | 0.   | 0.   |
| 28 Q38 | -2.0947264E-04 | 0.   | 0.   |
| 29 P40 | -6.9863734E-02 | -0.  | -0.  |
| 30 P41 | -7.7000251E-03 | -0.  | -0.  |
| 31 P42 | 2.4019727E-02  | -0.  | -0.  |
| 32 P43 | 8.2388381E-02  | -0.  | -0.  |
| 33 P44 | 8.2347188E-02  | -0.  | -0.  |
| 34 P45 | 1.3473919E-01  | 0.   | 0.   |
| 35 P46 | 1.8713384E-01  | 0.   | 0.   |
| 36 P47 | 2.3636693E-01  | 0.   | 0.   |
| 37 P48 | -1.5830868E 00 | 0.   | 0.   |
| 38 P49 | -9.9999998E-08 | -0.  | -0.  |
| 39 P50 | 7.6357098E-02  | -0.  | -0.  |
| 40 P51 | 7.5488912E-03  | 0.   | 0.   |
| 41 P52 | -2.0918821E-02 | 0.   | 0.   |
| 42 P53 | -1.0471528E-01 | 0.   | 0.   |
| 43 P54 | -8.8180128E-02 | -0.  | -0.  |
| 44 P55 | -1.4434199E-01 | -0.  | -0.  |
| 45 P56 | -2.0050685E-01 | -0.  | -0.  |
| 46 P57 | -1.9110308E-01 | -0.  | -0.  |
| 47 P58 | -2.4136719E-01 | -0.  | -0.  |
| 48 P59 | -2.9163130E-01 | -0.  | -0.  |
| 49 P60 | -9.9999998E-08 | -0.  | -0.  |
| 50 P62 | 4.7196770E-03  | -0.  | -0.  |

| (G1M)  | P124           | P125 | P126 |
|--------|----------------|------|------|
| 51 P63 | 4.7187312E-03  | -0.  | -0.  |
| 52 P64 | -6.1208215E-04 | -0.  | -0.  |
| 53 P67 | 1.7979430E-03  | -0.  | -0.  |
| 54 P68 | 1.7975829E-03  | -0.  | -0.  |
| 55 P69 | -2.3317036E-04 | -0.  | -0.  |
| 56 P72 | -6.6647190E-03 | -0.  | -0.  |
| 57 P73 | -6.6633830E-03 | -0.  | -0.  |
| 58 P74 | 8.6432940E-04  | -0.  | -0.  |
| 59 P77 | -4.2373139E-02 | -0.  | -0.  |
| 60 P79 | -1.1422128E-02 | -0.  | -0.  |
| 61 P80 | -1.1419839E-02 | -0.  | -0.  |
| 62 P81 | 1.4813049E-03  | 0.   | 0.   |
| 63 P82 | -2.5046069E-03 | 0.   | 0.   |
| 64 P83 | -0.            | -0.  | -0.  |
| 65 P84 | -0.            | -0.  | -0.  |
| 66 P93 | 8.2988254E-03  | -0.  | -0.  |
| 67 P94 | 1.4243618E-03  | -0.  | -0.  |
| 68 P95 | -5.7130034E-03 | -0.  | -0.  |
| 69 P96 | 1.6266769E 00  | -0.  | -0.  |
| 70 P97 | 7.6043816E-02  | 0.   | 0.   |
| 71 Q19 | 3.5945136E-03  | -0.  | -0.  |
| 72 Q20 | 4.0465966E-03  | -0.  | -0.  |
| 73 Q21 | -1.4184591E-04 | -0.  | -0.  |
| 74 Q22 | -5.1633608E-04 | -0.  | -0.  |
| 75 Q23 | 3.8554044E-04  | -0.  | -0.  |
| 76 Q24 | -3.2494135E-06 | -0.  | -0.  |
| 77 Q26 | -6.5239428E-04 | -0.  | -0.  |
| 78 Q28 | -5.3265828E-03 | -0.  | -0.  |

## VII. STRUCTURAL ANALYSIS FOR UNSYMMETRICAL FLIGHT CONDITIONS

Unsymmetrical flight loads for rolling pull-out are composed of two portions: those due <sup>to</sup> symmetrical load factor application, (pages <sup>207</sup>~~146~~) and those due to anti-symmetrical effects induced by aileron deflection, (pages <sup>207</sup>~~146~~). The symmetrical loading portion was based on airplane load factors of 3.0, 2.5, 2.0, and 1.0. The anti-symmetrical portion was based on aileron deflections of 15, -19, 7.05, -8.94, and 0 degrees. Twenty combinations of load factor and aileron effects were obtained from this input.

Analysis for the summed effect of the 20 combinations or conditions appear as follows:

|   |               |
|---|---------------|
| Deflections of Redundant Structure.....       | Pgs. 210- 229 |
| Internal Loads in Redundant Structure.....    | Pgs. 230- 269 |
| Internal Stresses in Redundant Structure..... | Pgs. 270- 309 |

The internal load in the spar cap at the fuselage (load P48) was found to be -57,414 pounds limit for the combination of 3.0 g and 15 degrees aileron deflection, (Pg.230). The design value for symmetrical flight was -54,956 pounds limit, (cond. "PLAFO", Pg.134). This slightly excessive load resulted in reducing the maximum permissible unsymmetrical flight load factor in the criteria from 3.0 g to 2.5 g. The maximum unsymmetrical flight value of P48 is now for the combination of 2.5 g and 15 degrees aileron deflection and is equal to -52,960 pounds (Pg.240).



7. JUNE 1963

JOB 206.

REDUNDANT STRESS ANALYSIS

5-C SYMMETRIC LOAD CONDITIONS

| NO. | CODE | DESCRIPTION   |
|-----|------|---|
| 1   | S3.0 | SYMMETRIC PORTION OF UNSYMMETRIC FLIGHT<br>DUE TO 3.0 G |
| 2   | S2.5 | SYMMETRIC PORTION OF UNSYMMETRIC FLIGHT<br>DUE TO 2.5 G |
| 3   | S2.0 | SYMMETRIC PORTION OF UNSYMMETRIC FLIGHT<br>DUE TO 2.0 G |
| 4   | S1.0 | SYMMETRIC PORTION OF UNSYMMETRIC FLIGHT<br>DUE TO 1.0 G |

APPLIED-LOAD CONDITIONS  
5-SYMMETRIC LOADS (PMC)

PAGE 208

| PER  | S | S3.0           | S2.5           | S2.0           | S1.0           |
|------|---|----------------|----------------|----------------|----------------|
| P100 |   | 1.0669534E 02  | 9.2703687E 01  | 7.8712033E 01  | 5.0695080E 01  |
| P101 |   | 2.3679665E 02  | 1.9905267E 02  | 1.6130868E 02  | 8.5737157E 01  |
| P102 |   | 2.3279357E 02  | 1.7376405E 02  | 1.1473452E 02  | -3.4624301E 00 |
| P103 |   | 3.7227412E 02  | 2.9658606E 02  | 2.2089798E 02  | 6.9349648E 01  |
| P104 |   | 3.6872996E 02  | 3.2468653E 02  | 2.8064309E 02  | 1.9245150E 02  |
| P105 |   | 2.4003358E 02  | 2.2655192E 02  | 2.1307024E 02  | 1.8606474E 02  |
| P106 |   | 5.3940757E 02  | 4.5070824E 02  | 3.6200885E 02  | 1.8440655E 02  |
| P107 |   | 5.0300503E 02  | 5.5137388E 02  | 4.9974267E 02  | 3.9635558E 02  |
| P108 |   | 6.8738348E 02  | 6.6935699E 02  | 6.5133050E 02  | 6.1523159E 02  |
| P109 |   | 5.9156330E 02  | 4.9669036E 02  | 4.0181738E 02  | 2.1185118E 02  |
| P110 |   | 7.0992978E 02  | 6.5367733E 02  | 5.9742506E 02  | 4.8477397E 02  |
| P111 |   | 7.4209814E 02  | 7.1629045E 02  | 6.9048313E 02  | 6.3879310E 02  |
| P112 |   | -1.1859000E 01 | -9.8824999E 00 | -7.9060000E 00 | -3.9530000E 00 |
| P113 |   | 7.4546300E 02  | 6.2744260E 02  | 5.0942227E 02  | 2.7310951E 02  |
| P114 |   | 6.3796428E 02  | 5.8117713E 02  | 5.2438985E 02  | 4.1065046E 02  |
| P115 |   | 1.7721639E 02  | 1.6728783E 02  | 1.5735893E 02  | 1.3743075E 02  |
| P116 |   | 9.0936078E 02  | 7.4809190E 02  | 5.8682303E 02  | 2.6391692E 02  |
| P117 |   | 2.0620898E 01  | 6.0649450E 01  | 1.0067622E 02  | 1.8079660E 02  |
| P118 |   | 3.3790970E 02  | 2.4823085E 02  | 1.5855102E 02  | -2.0963745E 01 |
| P119 |   | -2.4816706E 02 | -2.1522406E 02 | -1.8228007E 02 | -1.1646629E 02 |
| P120 |   | 1.8376705E 03  | 1.7645126E 03  | 1.6913545E 03  | 1.5440415E 03  |
| P121 |   | -2.7134804E 04 | -3.2272331E 04 | -3.7409855E 04 | -4.7696211E 04 |
| P122 |   | -1.5387084E 02 | -1.1170149E 02 | -6.9529169E 01 | 1.4822154E 01  |
| P123 |   | 5.0195940E 02  | 3.8291562E 02  | 2.6387192E 02  | 2.5496781E 01  |
| P124 |   | -1.3968867E 02 | -1.4595513E 02 | -1.5222152E 02 | -1.6479080E 02 |
| P125 |   | 0.             | 0.             | 0.             | 0.             |
| P126 |   | 0.             | 0.             | 0.             | 0.             |

7. JUNE 1963

JOB 207

REDUNDANT STRESS ANALYSIS

5-C ANTI-SYMMETRIC LOAD CONDITIONS

| NO. | CODE   | DESCRIPTION   |
|-----|--------|---|
| 1   | +15.00 | ANTI-SYMMETRIC PORTION OF ROLLING PULL-OUT MANEUVER<br>FOR LEFT AILERON DEFLECTION = +15.00 DEGREES |
| 2   | -19.00 | ANTI-SYMMETRIC PORTION OF ROLLING PULL-OUT<br>FOR RIGHT AILERON DEFLECTION = -19.00 DEGREES         |
| 3   | +07.05 | ANTI-SYMMETRIC PORTION OF ROLLING PULL-OUT<br>FOR LEFT AILERON DEFLECTION = 7.05 DEGREES            |
| 4   | -08.94 | ANTI-SYMMETRIC PORTION OF ROLLING PULL-OUT<br>FOR RIGHT AILERON DEFLECTION = -8.94 DEGREES          |
| 5   | 00.00  | ANTI-SYMMETRIC PORTION OF ROLLING PULL-OUT<br>FOR ZERO AILERON DEFLECTION                           |

APPLIED-LOAD CONDITIONS  
ELASTIC ANTI-SYMMETRIC LOADING (1116) 24.APRIL.63

PAGE 208

| JM..AS | +15.00         | -19.00         | +07.05          | -08.94         |
|--------|----------------|----------------|-----------------|----------------|
| P100   | -2.6010187E 02 | 3.1599500E 02  | -1.0137494E 02  | 1.2771173E 02  |
| P101   | -9.0799208E 01 | 7.7891660E 01  | 7.9442431E 01   | -8.5524453E 01 |
| P102   | 7.6732531E 02  | -1.0355197E 03 | 5.1495504E 02   | -6.4132796E 02 |
| P103   | -4.6574680E 02 | 5.1006684E 02  | 1.6890587E 01   | 3.9929829E 00  |
| P104   | -1.3435421E 02 | 1.1830567E 02  | 5.7188901E 01   | -6.4750955E 01 |
| P105   | 9.5838054E 02  | -1.2402839E 03 | 4.4468293E 02   | -5.7751550E 02 |
| P106   | -3.9753142E 02 | 4.0189189E 02  | 1.0575919E 02   | -1.0370455E 02 |
| P107   | -7.7840953E 01 | 3.7204447E 01  | 9.9544493E 01   | -1.1869235E 02 |
| P108   | 2.4358200E 02  | -3.2921548E 02 | 1.4388849E 02   | -1.8423885E 02 |
| P109   | -4.2963930E 02 | 4.3675027E 02  | 9.6440209E 01   | -9.3089528E 01 |
| P110   | -1.4021168E 00 | -6.0737200E 01 | 8.3734497E 01   | -1.1301450E 02 |
| P111   | 7.6222636E 02  | -9.8343632E 02 | 3.2070173E 02   | -4.2493566E 02 |
| P112   | -7.2042442E-01 | 7.2042442E-01  | -2.1023991E 01  | 2.1023991E 01  |
| P113   | -3.0680130E 02 | 2.8453919E 02  | 1.5014946E 02   | -1.6063935E 02 |
| P114   | -1.0391752E 02 | 7.3689642E 01  | -5.4794259E 01  | 4.0550929E 01  |
| P115   | 4.7219923E 02  | -6.1298542E 02 | 3.4180796E 01   | -1.0051903E 02 |
| P116   | -4.2124202E 02 | 4.1731151E 02  | * 1.4215278E 02 | -1.4400483E 02 |
| P117   | -6.8319285E 01 | 1.1229677E 02  | 2.0749485E 02   | 2.2821693E 02  |
| P118   | -4.2414584E 02 | 4.9438671E 02  | 9.6730477E 01   | -6.3633144E 01 |
| P119   | -1.9173568E 02 | 2.2103506E 02  | -4.9799277E 02  | 5.1179872E 02  |
| P120   | -3.3647024E 02 | 1.4177662E 02  | -2.4349258E 03  | 2.3431863E 03  |
| P121   | -1.0687586E 04 | 1.0793247E 04  | 4.1968504E 03   | -4.1470633E 03 |
| P122   | 6.9311724E 01  | -8.0953841E 01 | -2.5700182E 02  | 2.5151637E 02  |
| P123   | -6.3219022E 02 | 7.4293944E 02  | -1.6080766E 02  | 2.1299258E 02  |
| P124   | 3.6366295E 02  | -4.5236692E 02 | 9.7155007E 01   | -1.3895255E 02 |
| P125   | 0.             | 0.             | 0.              | 0.             |
| P126   | 0.             | 0.             | 0.              | 0.             |

\* should be -

JM..AS 00.00

|      |             |    |
|------|-------------|----|
| P100 | 1.7769674E  | 01 |
| P101 | 1.0346520E  | 02 |
| P102 | 1.3041655E  | 02 |
| P103 | 1.9987671E  | 02 |
| P104 | 1.0196416E  | 02 |
| P105 | -5.2330523E | 00 |
| P106 | 2.4796526E  | 02 |
| P107 | 1.1531935E  | 02 |
| P108 | 2.4812663E  | 01 |
| P109 | 2.5286365E  | 02 |
| P110 | 7.1464318E  | 01 |
| P111 | -3.2087631E | 01 |
| P112 | -1.7522896E | 01 |
| P113 | 2.4941150E  | 02 |
| P114 | -5.0312862E | 00 |
| P115 | -1.5922646E | 02 |
| P116 | 2.8823749E  | 02 |
| P117 | -1.4653653E | 02 |
| P118 | 2.5094905E  | 02 |
| P119 | -3.4546258E | 02 |
| P120 | -1.9287219E | 03 |
| P121 | 7.8131160E  | 03 |
| P122 | -2.4533032E | 02 |
| P123 | 1.1568330E  | 02 |
| P124 | -6.2617011E | 01 |
| P125 | 0.          |    |
| P126 | 0.          |    |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 210

| PT   | S3.0<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 7.4303628E 00     | 9.3467504E-01      | 8.3650378E 00  |
| P101 | 7.5034382E 00     | 1.1969668E 00      | 8.7004050E 00  |
| P102 | 7.5710551E 00     | 1.4396642E 00      | 9.0107192E 00  |
| P103 | 6.2366052E 00     | 7.6997116E-01      | 7.0065764E 00  |
| P104 | 6.2881170E 00     | 9.4643819E-01      | 7.2345552E 00  |
| P105 | 6.3478465E 00     | 3.9532036E 00      | 1.0301050E 01  |
| P106 | 5.0183792E 00     | 4.8503194E-01      | 5.5034111E 00  |
| P107 | 5.0976246E 00     | 6.9683641E-01      | 5.7944610E 00  |
| P108 | 5.1795626E 00     | 9.0906405E-01      | 5.0886266E 00  |
| P109 | 3.8387449E 00     | 2.1609935E-01      | 4.0548442E 00  |
| P110 | 3.9532036E 00     | 4.7573006E-01      | 4.4289336E 00  |
| P111 | 4.0672505E 00     | 7.3830396E-01      | 4.8055545E 00  |
| P112 | 2.7140599E 00     | -5.1890409E-02     | 2.6621695E 00  |
| P113 | 2.7573790E 00     | 4.3669497E-03      | 2.7617459E 00  |
| P114 | 2.9224283E 00     | 2.9067799E-01      | 3.2131063E 00  |
| P115 | 3.0302863E 00     | 5.7885106E-01      | 3.6091374E 00  |
| P116 | 1.7550449E 00     | -6.2097088E-02     | 1.6929478E 00  |
| P117 | 1.9720016E 00     | 3.8652180E-01      | 2.3585234E 00  |
| P118 | 8.8051230E-01     | -9.0874346E-02     | 7.8963796E-01  |
| P119 | 9.3605305E-01     | -6.7206103E-02     | 8.6884695E-01  |
| P120 | 1.0233608E 00     | 7.5655815E-02      | 1.0990166E 00  |
| P121 | -1.8272603E-03    | -3.4534358E-03     | -5.2806961E-03 |
| P122 | 1.0973648E 00     | 2.1552310E-01      | 1.3128879E 00  |
| P123 | 3.7814476E-01     | -3.0407844E-02     | 3.4713692E-01  |
| P124 | 4.5063335E-01     | 8.7571722E-02      | 5.3820507E-01  |
| P125 | -7.8741724E-02    | 0.                 | -7.8741724E-02 |
| P126 | -9.7545997E-02    | 0.                 | -9.7545997E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 211

| PT   | S3.0<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 7.4303628E 00     | -2.0063176E 00     | 5.4240452E 00  |
| P101 | 7.5034382E 00     | -2.3428167E 00     | 5.1606216E 00  |
| P102 | 7.5710551E 00     | -2.6541779E 00     | 4.9168772E 00  |
| P103 | 6.2366052E 00     | -1.6551659E 00     | 4.5814393E 00  |
| P104 | 6.2881170E 00     | -1.8807217E 00     | 4.4073952E 00  |
| P105 | 6.3478465E 00     | 4.0672505E 00      | 1.0415097E 01  |
| P106 | 5.0183792E 00     | -1.1529796E 00     | 3.8653996E 00  |
| P107 | 5.0976246E 00     | -1.4248317E 00     | 3.6727929E 00  |
| P108 | 5.1795626E 00     | -1.6976949E 00     | 3.4818677E 00  |
| P109 | 3.8387449E 00     | -6.7861999E-01     | 3.1601249E 00  |
| P110 | 3.9532036E 00     | -1.0141456E 00     | 2.9390579E 00  |
| P111 | 4.0672505E 00     | -1.3537211E 00     | 2.7135295E 00  |
| P112 | 2.7140599E 00     | -2.1477507E-01     | 2.4992849E 00  |
| P113 | 2.7573790E 00     | -2.9011854E-01     | 2.4672605E 00  |
| P114 | 2.9224283E 00     | -6.6589110E-01     | 2.2565372E 00  |
| P115 | 3.0302863E 00     | -1.0366435E 00     | 1.9936428E 00  |
| P116 | 1.7550449E 00     | -9.5542939E-02     | 1.6595020E 00  |
| P117 | 1.9720016E 00     | -6.8022718E-01     | 1.2917744E 00  |
| P118 | 8.8051230E-01     | 3.5434536E-02      | 9.1594683E-01  |
| P119 | 9.3605305E-01     | -1.5557600E-03     | 9.3449730E-01  |
| P120 | 1.0233608E 00     | -1.9096424E-01     | 8.3239653E-01  |
| P121 | -1.8272603E-03    | 4.5398335E-03      | 2.7125732E-03  |
| P122 | 1.0973648E 00     | -3.7483512E-01     | 7.2252969E-01  |
| P123 | 3.7814476E-01     | 7.6544493E-03      | 3.8579921E-01  |
| P124 | 4.5063335E-01     | -1.5063303E-01     | 3.0000032E-01  |
| P125 | -7.8741724E-02    | 0.                 | -7.8741724E-02 |
| P126 | -9.7545997E-02    | 0.                 | -9.7545997E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 212

| PT   | S3.0<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 7.4303628E 00     | 1.8200448E 00      | 9.2504076E 00  |
| P101 | 7.5034382E 00     | 1.9295767E 00      | 9.4330149E 00  |
| P102 | 7.5710551E 00     | 2.0309263E 00      | 9.6019813E 00  |
| P103 | 6.2366052E 00     | 1.4742053E 00      | 7.7108105E 00  |
| P104 | 6.2881170E 00     | 1.5434679E 00      | 7.8315849E 00  |
| P105 | 6.3478465E 00     | 2.7140599E 00      | 9.0619063E 00  |
| P106 | 5.0183792E 00     | 1.0891553E 00      | 6.1075345E 00  |
| P107 | 5.0976246E 00     | 1.1727344E 00      | 6.2703590E 00  |
| P108 | 5.1795626E 00     | 1.2567810E 00      | 6.4363436E 00  |
| P109 | 3.8387449E 00     | 7.3145066E-01      | 4.5701955E 00  |
| P110 | 3.9532036E 00     | 8.3726473E-01      | 4.7904683E 00  |
| P111 | 4.0672505E 00     | 9.4569621E-01      | 5.0129467E 00  |
| P112 | 2.7140599E 00     | 4.0142918E-01      | 3.1154891E 00  |
| P113 | 2.7573790E 00     | 4.2974611E-01      | 3.1871251E 00  |
| P114 | 2.9224283E 00     | 5.5718169E-01      | 3.4796100E 00  |
| P115 | 3.0302863E 00     | 6.7237028E-01      | 3.7026566E 00  |
| P116 | 1.7550449E 00     | 2.1401359E-01      | 1.9690585E 00  |
| P117 | 1.9720016E 00     | 4.0477889E-01      | 2.3767805E 00  |
| P118 | 8.8051230E-01     | 5.6906791E-02      | 9.3741909E-01  |
| P119 | 9.3605305E-01     | 7.4761599E-02      | 1.0108147E 00  |
| P120 | 1.0233608E 00     | 1.3872835E-01      | 1.1620891E 00  |
| P121 | -1.8272603E-03    | -1.4961145E-03     | -3.3233748E-03 |
| P122 | 1.0973648E 00     | 1.9932696E-01      | 1.2966918E 00  |
| P123 | 3.7814476E-01     | 2.0516084E-02      | 3.9866084E-01  |
| P124 | 4.5063335E-01     | 7.4551229E-02      | 5.2518458E-01  |
| P125 | -7.8741724E-02    | 0.                 | -7.8741724E-02 |
| P126 | -9.7545997E-02    | 0.                 | -9.7545997E-02 |



## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 213

| PT   | 53.0<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 7.4303628E 00     | -2.2029353E 00     | 5.2274275E 00  |
| P101 | 7.5034382E 00     | -2.3347839E 00     | 5.1686544E 00  |
| P102 | 7.5710551E 00     | -2.4567827E 00     | 5.1142724E 00  |
| P103 | 6.2366052E 00     | -1.7846531E 00     | 4.4519522E 00  |
| P104 | 6.2881170E 00     | -1.8671481E 00     | 4.4209689E 00  |
| P105 | 6.3478465E 00     | 2.7573790E 00      | 9.1052254E 00  |
| P106 | 5.0183792E 00     | -1.3200512E 00     | 3.6983280E 00  |
| P107 | 5.0976246E 00     | -1.4184611E 00     | 3.6791635E 00  |
| P108 | 5.1795626E 00     | -1.5175263E 00     | 3.6620363E 00  |
| P109 | 3.8387449E 00     | -8.8922329E-01     | 2.9495216E 00  |
| P110 | 3.9532036E 00     | -1.0130847E 00     | 2.9401189E 00  |
| P111 | 4.0672505E 00     | -1.1399089E 00     | 2.9273417E 00  |
| P112 | 2.7140599E 00     | -4.9305958E-01     | 2.2210003E 00  |
| P113 | 2.7573790E 00     | -5.2642125E-01     | 2.2309577E 00  |
| P114 | 2.9224283E 00     | -6.7511676E-01     | 2.2473115E 00  |
| P115 | 3.0302863E 00     | -8.0806494E-01     | 2.2222214E 00  |
| P116 | 1.7550449E 00     | -2.6662888E-01     | 1.4884160E 00  |
| P117 | 1.9720016E 00     | -4.8361832E-01     | 1.4883833E 00  |
| P118 | 8.8051250E-01     | -7.5558673E-02     | 8.0495363E-01  |
| P119 | 9.3605305E-01     | -9.7552232E-02     | 8.3850082E-01  |
| P120 | 1.0233608E 00     | -1.7070141E-01     | 8.5265936E-01  |
| P121 | -1.8272603E-03    | 1.7000032E-03      | -1.2725714E-04 |
| P122 | 1.0973648E 00     | -2.3955081E-01     | 8.5780600E-01  |
| P123 | 3.7814476E-01     | -2.7926972E-02     | 3.5021779E-01  |
| P124 | 4.5063335E-01     | -8.9887096E-02     | 3.6074626E-01  |
| P125 | -7.8741724E-02    | 0.                 | -7.8741724E-02 |
| P126 | -9.7545997E-02    | 0.                 | -9.7545997E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 214

| PT   | S3.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|------|-------------------|-------------------|----------------|
| P100 | 7.4303628E 00     | 1.0655548E 00     | 8.4959176E 00  |
| P101 | 7.5034382E 00     | 1.0430986E 00     | 8.5465368E 00  |
| P102 | 7.5710551E 00     | 1.0223199E 00     | 8.5933750E 00  |
| P103 | 6.2366052E 00     | 8.5134076E-01     | 7.0879459E 00  |
| P104 | 6.2881170E 00     | 8.3130521E-01     | 7.1194222E 00  |
| P105 | 6.3478465E 00     | 2.9224283E 00     | 9.2702748E 00  |
| P106 | 5.0183792E 00     | 6.5809642E-01     | 5.6764756E 00  |
| P107 | 5.0976246E 00     | 6.3308544E-01     | 5.7307100E 00  |
| P108 | 5.1795626E 00     | 6.0822614E-01     | 5.7877887E 00  |
| P109 | 3.8387449E 00     | 4.8236250E-01     | 4.3211073E 00  |
| P110 | 3.9532036E 00     | 4.5352597E-01     | 4.4067295E 00  |
| P111 | 4.0672505E 00     | 4.2558450E-01     | 4.4928350E 00  |
| P112 | 2.7140599E 00     | 3.3179282E-01     | 3.0458527E 00  |
| P113 | 2.7573790E 00     | 3.3001495E-01     | 3.0873939E 00  |
| P114 | 2.9224283E 00     | 3.0616546E-01     | 3.2285937E 00  |
| P115 | 3.0302863E 00     | 2.7098443E-01     | 3.3012708E 00  |
| P116 | 1.7550449E 00     | 1.8761195E-01     | 1.9426569E 00  |
| P117 | 1.9720016E 00     | 1.3833078E-01     | 2.1103324E 00  |
| P118 | 8.8051230E-01     | 7.8056630E-02     | 9.5856893E-01  |
| P119 | 9.3605305E-01     | 8.1935102E-02     | 1.0179882E 00  |
| P120 | 1.0233608E 00     | 6.8386359E-02     | 1.0917471E 00  |
| P121 | -1.8272603E-03    | 3.6983454E-04     | -1.4574258E-03 |
| P122 | 1.0973648E 00     | 5.3411189E-02     | 1.1507760E 00  |
| P123 | 3.7814476E-01     | 2.6679288E-02     | 4.0482404E-01  |
| P124 | 4.5063335E-01     | 1.6057929E-02     | 4.6669127E-01  |
| P125 | -7.8741724E-02    | 0.                | -7.8741724E-02 |
| P126 | -9.7545997E-02    | 0.                | -9.7545997E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 215

| PT   | S2.5<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 6.5846372E 00     | 9.3467504E-01      | 7.5193122E 00  |
| P101 | 6.6646683E 00     | 1.1969668E 00      | 7.8616351E 00  |
| P102 | 6.7387214E 00     | 1.4396642E 00      | 8.1783855E 00  |
| P103 | 5.5325093E 00     | 7.6997116E-01      | 6.3024805E 00  |
| P104 | 5.5909351E 00     | 9.4643819E-01      | 6.5373733E 00  |
| P105 | 5.6562424E 00     | 3.5181981E 00      | 9.1744405E 00  |
| P106 | 4.4482909E 00     | 4.8503194E-01      | 4.9333228E 00  |
| P107 | 4.5358613E 00     | 6.9683641E-01      | 5.2326977E 00  |
| P108 | 4.6251575E 00     | 9.0906405E-01      | 5.5342216E 00  |
| P109 | 3.3949857E 00     | 2.1609935E-01      | 3.6110850E 00  |
| P110 | 3.5181981E 00     | 4.7573006E-01      | 3.9939281E 00  |
| P111 | 3.6406474E 00     | 7.3830396E-01      | 4.3789513E 00  |
| P112 | 2.3859382E 00     | -5.1890409E-02     | 2.3340478E 00  |
| P113 | 2.4287911E 00     | 4.3669497E-03      | 2.4331580E 00  |
| P114 | 2.5993302E 00     | 2.9067799E-01      | 2.8900162E 00  |
| P115 | 2.7198393E 00     | 5.7885106E-01      | 3.2986903E 00  |
| P116 | 1.5408926E 00     | -6.2097088E-02     | 1.4787955E 00  |
| P117 | 1.7756653E 00     | 3.8652180E-01      | 2.1621870E 00  |
| P118 | 7.6758829E-01     | -9.0874346E-02     | 6.7681395E-01  |
| P119 | 8.1866401E-01     | -6.7206103E-02     | 7.5145792E-01  |
| P120 | 9.1070099E-01     | 7.5655815E-02      | 9.8655680E-01  |
| P121 | -1.9835360E-03    | -3.4534358E-03     | -5.4369718E-03 |
| P122 | 9.9123417E-01     | 2.1552310E-01      | 1.2067573E 00  |
| P123 | 3.3010486E-01     | -3.0407844E-02     | 2.9969702E-01  |
| P124 | 4.0767953E-01     | 8.7571722E-02      | 4.9525125E-01  |
| P125 | -6.8697231E-02    | 0.                 | -6.8697231E-02 |
| P126 | -8.8159434E-02    | 0.                 | -8.8159434E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 216

| PT   | S2.5<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 6.5846372E 00     | -2.0063176E 00     | 4.5783196E 00  |
| P101 | 6.6646683E 00     | -2.3428167E 00     | 4.3218517E 00  |
| P102 | 6.7387214E 00     | -2.6541779E 00     | 4.0845435E 00  |
| P103 | 5.5325093E 00     | -1.6551659E 00     | 3.8773434E 00  |
| P104 | 5.5909351E 00     | -1.8807217E 00     | 3.7102134E 00  |
| P105 | 5.6562424E 00     | 3.6406474E 00      | 9.2968898E 00  |
| P106 | 4.4482909E 00     | -1.1529796E 00     | 3.2953114E 00  |
| P107 | 4.5358613E 00     | -1.4248317E 00     | 3.1110296E 00  |
| P108 | 4.6251575E 00     | -1.6976949E 00     | 2.9274626E 00  |
| P109 | 3.3949857E 00     | -6.7861999E-01     | 2.7163657E 00  |
| P110 | 3.5181981E 00     | -1.0141456E 00     | 2.5040525E 00  |
| P111 | 3.6406474E 00     | -1.3537211E 00     | 2.2869263E 00  |
| P112 | 2.3859382E 00     | -2.1477507E-01     | 2.1711631E 00  |
| P113 | 2.4287911E 00     | -2.9011854E-01     | 2.1386726E 00  |
| P114 | 2.5993382E 00     | -6.6589110E-01     | 1.9334471E 00  |
| P115 | 2.7198393E 00     | -1.0366435E 00     | 1.6831958E 00  |
| P116 | 1.5408926E 00     | -9.5542939E-02     | 1.4453496E 00  |
| P117 | 1.7756653E 00     | -6.8022718E-01     | 1.0954381E 00  |
| P118 | 7.6768829E-01     | 3.5434536E-02      | 8.0312282E-01  |
| P119 | 8.1866401E-01     | -1.5557600E-03     | 8.1710826E-01  |
| P120 | 9.1040099E-01     | -1.9096424E-01     | 7.1993676E-01  |
| P121 | -1.9835360E-03    | 4.5398335E-03      | 2.5562975E-03  |
| P122 | 9.9123417E-01     | -3.7483512E-01     | 6.1639906E-01  |
| P123 | 3.3010486E-01     | 7.6544493E-03      | 3.3775931E-01  |
| P124 | 4.0767953E-01     | -1.5063303E-01     | 2.5704650E-01  |
| P125 | -6.8697231E-02    | 0.                 | -6.8697231E-02 |
| P126 | -8.8159434E-02    | 0.                 | -8.8159434E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 217

| PT   | S2.5<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 6.5846372E 00     | 1.8200448E 00      | 8.4046819E 00  |
| P101 | 6.6646683E 00     | 1.9295767E 00      | 8.5942450E 00  |
| P102 | 6.7387214E 00     | 2.0309263E 00      | 8.7696476E 00  |
| P103 | 5.5325093E 00     | 1.4742053E 00      | 7.0067146E 00  |
| P104 | 5.5909351E 00     | 1.5434679E 00      | 7.1344030E 00  |
| P105 | 5.6562424E 00     | 2.3859382E 00      | 8.0421805E 00  |
| P106 | 4.4482909E 00     | 1.0891553E 00      | 5.5374463E 00  |
| P107 | 4.5358613E 00     | 1.1727344E 00      | 5.7085956E 00  |
| P108 | 4.6251575E 00     | 1.2567810E 00      | 5.8819385E 00  |
| P109 | 3.3949857E 00     | 7.3145066E-01      | 4.1264363E 00  |
| P110 | 3.5181981E 00     | 8.3726473E-01      | 4.3554628E 00  |
| P111 | 3.6406474E 00     | 9.4569621E-01      | 4.5863435E 00  |
| P112 | 2.3859382E 00     | 4.0142918E-01      | 2.7873673E 00  |
| P113 | 2.4287911E 00     | 4.2974611E-01      | 2.8585372E 00  |
| P114 | 2.5993382E 00     | 5.5718169E-01      | 3.1565199E 00  |
| P115 | 2.7198393E 00     | 6.7237028E-01      | 3.3922096E 00  |
| P116 | 1.5408926E 00     | 2.1401359E-01      | 1.7549061E 00  |
| P117 | 1.7756653E 00     | 4.0477889E-01      | 2.1804441E 00  |
| P118 | 7.6768829E-01     | 5.6906791E-02      | 8.2459508E-01  |
| P119 | 8.1866401E-01     | 7.4761599E-02      | 8.9342562E-01  |
| P120 | 9.1090099E-01     | 1.3872835E-01      | 1.0496293E 00  |
| P121 | -1.9835360E-03    | -1.4961145E-03     | -3.4796506E-03 |
| P122 | 9.9123417E-01     | 1.9932696E-01      | 1.1905611E 00  |
| P123 | 3.3010486E-01     | 2.0516084E-02      | 3.5062095E-01  |
| P124 | 4.0767953E-01     | 7.4551229E-02      | 4.8223076E-01  |
| P125 | -6.8697231E-02    | 0.                 | -6.8697231E-02 |
| P126 | -8.8159434E-02    | 0.                 | -8.8159434E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 218

| PT   | S2.5<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 6.5846372E 00     | -2.2029353E 00     | 4.3817019E 00  |
| P101 | 6.6646683E 00     | -2.3347839E 00     | 4.3298845E 00  |
| P102 | 6.7387214E 00     | -2.4567827E 00     | 4.2819387E 00  |
| P103 | 5.5325093E 00     | -1.7846531E 00     | 3.7478563E 00  |
| P104 | 5.5909351E 00     | -1.8671481E 00     | 3.7237870E 00  |
| P105 | 5.6562424E 00     | 2.4287911E 00      | 8.0850334E 00  |
| P106 | 4.4482909E 00     | -1.3200512E 00     | 3.1282398E 00  |
| P107 | 4.5358613E 00     | -1.4184611E 00     | 3.1174002E 00  |
| P108 | 4.6251575E 00     | -1.5175263E 00     | 3.1076313E 00  |
| P109 | 3.3949857E 00     | -8.8922329E-01     | 2.5057624E 00  |
| P110 | 3.5181981E 00     | -1.0130847E 00     | 2.5051134E 00  |
| P111 | 3.6406474E 00     | -1.1399089E 00     | 2.5007385E 00  |
| P112 | 2.3859382E 00     | -4.9305958E-01     | 1.8928786E 00  |
| P113 | 2.4287911E 00     | -5.2642125E-01     | 1.9023698E 00  |
| P114 | 2.5993382E 00     | -6.7511676E-01     | 1.9242214E 00  |
| P115 | 2.7198393E 00     | -8.0806494E-01     | 1.9117743E 00  |
| P116 | 1.5408926E 00     | -2.6662888E-01     | 1.2742637E 00  |
| P117 | 1.7756653E 00     | -4.8361832E-01     | 1.2920469E 00  |
| P118 | 7.6768829E-01     | -7.5558673E-02     | 6.9212962E-01  |
| P119 | 8.1866401E-01     | -9.7552232E-02     | 7.2111179E-01  |
| P120 | 9.1090099E-01     | -1.7070141E-01     | 7.4019958E-01  |
| P121 | -1.9835360E-03    | 1.7000032E-03      | -2.8353286E-04 |
| P122 | 9.9123417E-01     | -2.3955881E-01     | 7.5167537E-01  |
| P123 | 3.3010486E-01     | -2.7926972E-02     | 3.0217789E-01  |
| P124 | 4.0767953E-01     | -8.9887096E-02     | 3.1779244E-01  |
| P125 | -6.8697231E-02    | 0.                 | -6.8697231E-02 |
| P126 | -8.8159434E-02    | 0.                 | -8.8159434E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 219

| PT   | S2.5<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|------|-------------------|-------------------|----------------|
| P100 | 6.5846372E 00     | 1.0655548E 00     | 7.6501920E 00  |
| P101 | 6.6646683E 00     | 1.0430986E 00     | 7.7077670E 00  |
| P102 | 6.7387214E 00     | 1.0223199E 00     | 7.7610413E 00  |
| P103 | 5.5325093E 00     | 8.5134076E-01     | 6.3838500E 00  |
| P104 | 5.5909351E 00     | 8.3130521E-01     | 6.4222403E 00  |
| P105 | 5.6562424E 00     | 2.5993382E 00     | 8.2555805E 00  |
| P106 | 4.4482909E 00     | 6.5809642E-01     | 5.1063873E 00  |
| P107 | 4.5358613E 00     | 6.3308544E-01     | 5.1689467E 00  |
| P108 | 4.6251575E 00     | 6.0822614E-01     | 5.2333837E 00  |
| P109 | 3.3949857E 00     | 4.8236250E-01     | 3.8773482E 00  |
| P110 | 3.5181981E 00     | 4.5352597E-01     | 3.9717240E 00  |
| P111 | 3.6406474E 00     | 4.2558450E-01     | 4.0662318E 00  |
| P112 | 2.3859382E 00     | 3.3179282E-01     | 2.7177310E 00  |
| P113 | 2.4287911E 00     | 3.3001495E-01     | 2.7588060E 00  |
| P114 | 2.5993382E 00     | 3.0616546E-01     | 2.9055037E 00  |
| P115 | 2.7198393E 00     | 2.7098443E-01     | 2.9908237E 00  |
| P116 | 1.5408926E 00     | 1.8761195E-01     | 1.7285045E 00  |
| P117 | 1.7756653E 00     | 1.3833078E-01     | 1.9139960E 00  |
| P118 | 7.6768829E-01     | 7.8056630E-02     | 8.4574492E-01  |
| P119 | 8.1866401E-01     | 8.1935102E-02     | 9.0059912E-01  |
| P120 | 9.1090099E-01     | 6.8386359E-02     | 9.7928734E-01  |
| P121 | -1.9835360E-03    | 3.6983454E-04     | -1.6137015E-03 |
| P122 | 9.9123417E-01     | 5.3411189E-02     | 1.0446454E 00  |
| P123 | 3.3010486E-01     | 2.6679288E-02     | 3.5678415E-01  |
| P124 | 4.0767953E-01     | 1.6057929E-02     | 4.2373745E-01  |
| P125 | -6.8697231E-02    | 0.                | -6.8697231E-02 |
| P126 | -8.8159434E-02    | 0.                | -8.8159434E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 220

| PT   | S2.0<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 5.7389113E 00     | 9.3467504E-01      | 6.6735863E 00  |
| P101 | 5.8258986E 00     | 1.1969668E 00      | 7.0228654E 00  |
| P102 | 5.9063876E 00     | 1.4396642E 00      | 7.3460518E 00  |
| P103 | 4.8284135E 00     | 7.6997116E-01      | 5.5983847E 00  |
| P104 | 4.8937531E 00     | 9.4643819E-01      | 5.8401913E 00  |
| P105 | 4.9646383E 00     | 3.0831926E 00      | 8.0478308E 00  |
| P106 | 3.8782024E 00     | 4.8503194E-01      | 4.3632343E 00  |
| P107 | 3.9740978E 00     | 6.9683641E-01      | 4.6709341E 00  |
| P108 | 4.0707526E 00     | 9.0906405E-01      | 4.9798166E 00  |
| P109 | 2.9512264E 00     | 2.1609935E-01      | 3.1673257E 00  |
| P110 | 3.0831926E 00     | 4.7573006E-01      | 3.5589226E 00  |
| P111 | 3.2140441E 00     | 7.3830396E-01      | 3.9523480E 00  |
| P112 | 2.0578165E 00     | -5.1890409E-02     | 2.0059261E 00  |
| P113 | 2.1002031E 00     | 4.3669497E-03      | 2.1045700E 00  |
| P114 | 2.2762481E 00     | 2.9067799E-01      | 2.5669261E 00  |
| P115 | 2.4093921E 00     | 5.7885106E-01      | 2.9882432E 00  |
| P116 | 1.3267402E 00     | -6.2097088E-02     | 1.2646431E 00  |
| P117 | 1.5793289E 00     | 3.8652180E-01      | 1.9658507E 00  |
| P118 | 6.5486426E-01     | -9.0874346E-02     | 5.6398991E-01  |
| P119 | 7.0127497E-01     | -6.7206103E-02     | 6.3406886E-01  |
| P120 | 7.9844118E-01     | 7.5655815E-02      | 8.7409699E-01  |
| P121 | -2.1398121E-03    | -3.4534358E-03     | -5.5932479E-03 |
| P122 | 8.8510355E-01     | 2.1552310E-01      | 1.1006266E 00  |
| P123 | 2.8206495E-01     | -3.0407844E-02     | 2.5165711E-01  |
| P124 | 3.6472572E-01     | 8.7571722E-02      | 4.5229744E-01  |
| P125 | -5.8652738E-02    | 0.                 | -5.8652738E-02 |
| P126 | -7.8772870E-02    | 0.                 | -7.8772870E-02 |



## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 221

| PT   | S2.0<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 5.7389113E 00     | -2.0063176E 00     | 3.7325937E 00  |
| P101 | 5.8258986E 00     | -2.3428167E 00     | 3.4830819E 00  |
| P102 | 5.9063876E 00     | -2.6541779E 00     | 3.2522097E 00  |
| P103 | 4.8284135E 00     | -1.6551659E 00     | 3.1732476E 00  |
| P104 | 4.8937531E 00     | -1.8807217E 00     | 3.0130314E 00  |
| P105 | 4.9646383E 00     | 3.2140441E 00      | 8.1786823E 00  |
| P106 | 3.8782024E 00     | -1.1529796E 00     | 2.7252229E 00  |
| P107 | 3.9740978E 00     | -1.4248317E 00     | 2.5492661E 00  |
| P108 | 4.0707526E 00     | -1.6976949E 00     | 2.3730577E 00  |
| P109 | 2.9512264E 00     | -6.7861999E-01     | 2.2726064E 00  |
| P110 | 3.0831926E 00     | -1.0141456E 00     | 2.0690469E 00  |
| P111 | 3.2140441E 00     | -1.3537211E 00     | 1.8603230E 00  |
| P112 | 2.0578165E 00     | -2.1477507E-01     | 1.8430414E 00  |
| P113 | 2.1002031E 00     | -2.9011854E-01     | 1.8100846E 00  |
| P114 | 2.2762481E 00     | -6.6589110E-01     | 1.6103570E 00  |
| P115 | 2.4093921E 00     | -1.0366435E 00     | 1.3727486E 00  |
| P116 | 1.3267402E 00     | -9.5542939E-02     | 1.2311972E 00  |
| P117 | 1.5793289E 00     | -6.8022718E-01     | 8.9910175E-01  |
| P118 | 6.5486426E-01     | 3.5434536E-02      | 6.9029878E-01  |
| P119 | 7.0127497E-01     | -1.5557600E-03     | 6.9971921E-01  |
| P120 | 7.9844118E-01     | -1.9096424E-01     | 6.0747695E-01  |
| P121 | -2.1398121E-03    | 4.5398335E-03      | 2.4000215E-03  |
| P122 | 8.8510355E-01     | -3.7483512E-01     | 5.1026843E-01  |
| P123 | 2.8206495E-01     | 7.6544493E-03      | 2.8971940E-01  |
| P124 | 3.6472572E-01     | -1.5063303E-01     | 2.1409269E-01  |
| P125 | -5.8652738E-02    | 0.                 | -5.8652738E-02 |
| P126 | -7.8772870E-02    | 0.                 | -7.8772870E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 222

| PT   | S2.0<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 5.7389113E 00     | 1.8200448E 00      | 7.5589561E 00  |
| P101 | 5.8258986E 00     | 1.9295767E 00      | 7.7554753E 00  |
| P102 | 5.9063876E 00     | 2.0309263E 00      | 7.9373138E 00  |
| P103 | 4.8284135E 00     | 1.4742053E 00      | 6.3026189E 00  |
| P104 | 4.8937531E 00     | 1.5434679E 00      | 6.4372210E 00  |
| P105 | 4.9646383E 00     | 2.0578165E 00      | 7.0224548E 00  |
| P106 | 3.8782024E 00     | 1.0891553E 00      | 4.9673578E 00  |
| P107 | 3.9740978E 00     | 1.1727344E 00      | 5.1468322E 00  |
| P108 | 4.0707526E 00     | 1.2567810E 00      | 5.3275335E 00  |
| P109 | 2.9512264E 00     | 7.3145066E-01      | 3.6826770E 00  |
| P110 | 3.0831926E 00     | 8.3726473E-01      | 3.9204573E 00  |
| P111 | 3.2140441E 00     | 9.4569621E-01      | 4.1597403E 00  |
| P112 | 2.0578165E 00     | 4.0142918E-01      | 2.4592457E 00  |
| P113 | 2.1002031E 00     | 4.2974611E-01      | 2.5299492E 00  |
| P114 | 2.2762481E 00     | 5.5718169E-01      | 2.8334298E 00  |
| P115 | 2.4093921E 00     | 6.7237028E-01      | 3.0817624E 00  |
| P116 | 1.3267402E 00     | 2.1401359E-01      | 1.5407538E 00  |
| P117 | 1.5793289E 00     | 4.0477889E-01      | 1.9841078E 00  |
| P118 | 6.5486426E-01     | 5.6906791E-02      | 7.1177105E-01  |
| P119 | 7.0127497E-01     | 7.4761599E-02      | 7.7603657E-01  |
| P120 | 7.9844118E-01     | 1.3872835E-01      | 9.3716953E-01  |
| P121 | -2.1398121E-03    | -1.4961145E-03     | -3.6359266E-03 |
| P122 | 8.8510355E-01     | 1.7932696E-01      | 1.0844305E 00  |
| P123 | 2.8206495E-01     | 2.0516084E-02      | 3.0258104E-01  |
| P124 | 3.6472572E-01     | 7.4551229E-02      | 4.3927695E-01  |
| P125 | -5.8652738E-02    | 0.                 | -5.8652738E-02 |
| P126 | -7.8772870E-02    | 0.                 | -7.8772870E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 223

| PT   | S2.0<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 5.7389113E 00     | -2.2029353E 00     | 3.5359760E 00  |
| P101 | 5.8258986E 00     | -2.3347839E 00     | 3.4911147E 00  |
| P102 | 5.9063876E 00     | -2.4567827E 00     | 3.4496048E 00  |
| P103 | 4.8284135E 00     | -1.7846531E 00     | 3.0437605E 00  |
| P104 | 4.8937531E 00     | -1.8671481E 00     | 3.0266050E 00  |
| P105 | 4.9646383E 00     | 2.1002031E 00      | 7.0648414E 00  |
| P106 | 3.8782024E 00     | -1.3200512E 00     | 2.5581513E 00  |
| P107 | 3.9740978E 00     | -1.4184611E 00     | 2.5556367E 00  |
| P108 | 4.0707526E 00     | -1.5175263E 00     | 2.5532263E 00  |
| P109 | 2.9512264E 00     | -8.8922329E-01     | 2.0620031E 00  |
| P110 | 3.0831926E 00     | -1.0130847E 00     | 2.0701079E 00  |
| P111 | 3.2140441E 00     | -1.1399089E 00     | 2.0741352E 00  |
| P112 | 2.0578165E 00     | -4.9305958E-01     | 1.5647569E 00  |
| P113 | 2.1002031E 00     | -5.2642125E-01     | 1.5737818E 00  |
| P114 | 2.2762481E 00     | -6.7511676E-01     | 1.6011313E 00  |
| P115 | 2.4093921E 00     | -8.0806494E-01     | 1.6013272E 00  |
| P116 | 1.3267402E 00     | -2.6662888E-01     | 1.0601113E 00  |
| P117 | 1.5793289E 00     | -4.8361832E-01     | 1.0957106E 00  |
| P118 | 6.5486426E-01     | -7.5558673E-02     | 5.7930559E-01  |
| P119 | 7.0127497E-01     | -9.7552232E-02     | 6.0372273E-01  |
| P120 | 7.9844118E-01     | -1.7070141E-01     | 6.2773978E-01  |
| P121 | -2.1398121E-03    | 1.7000032E-03      | -4.3980891E-04 |
| P122 | 8.8510355E-01     | -2.3955881E-01     | 6.4554474E-01  |
| P123 | 2.8206495E-01     | -2.7926972E-02     | 2.5413798E-01  |
| P124 | 3.6472572E-01     | -8.9887096E-02     | 2.7483863E-01  |
| P125 | -5.8652738E-02    | 0.                 | -5.8652738E-02 |
| P126 | -7.8772870E-02    | 0.                 | -7.8772870E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 224

| PT   | S2.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|------|-------------------|-------------------|----------------|
| P100 | 5.7389113E 00     | 1.0655548E 00     | 6.8044661E 00  |
| P101 | 5.8258986E 00     | 1.0430986E 00     | 6.8689972E 00  |
| P102 | 5.9063876E 00     | 1.0223199E 00     | 6.9287075E 00  |
| P103 | 4.8284135E 00     | 8.5134076E-01     | 5.6797543E 00  |
| P104 | 4.8937531E 00     | 8.3130521E-01     | 5.7250583E 00  |
| P105 | 4.9646363E 00     | 2.2762481E 00     | 7.2408863E 00  |
| P106 | 3.8782024E 00     | 6.5809642E-01     | 4.5362988E 00  |
| P107 | 3.9740978E 00     | 6.3308544E-01     | 4.6071832E 00  |
| P108 | 4.0707526E 00     | 6.0822614E-01     | 4.6789787E 00  |
| P109 | 2.9512264E 00     | 4.8236250E-01     | 3.4335888E 00  |
| P110 | 3.0831926E 00     | 4.5352597E-01     | 3.5367185E 00  |
| P111 | 3.2140441E 00     | 4.2558450E-01     | 3.6396286E 00  |
| P112 | 2.0578165E 00     | 3.3179282E-01     | 2.3896093E 00  |
| P113 | 2.1002031E 00     | 3.3001495E-01     | 2.4302180E 00  |
| P114 | 2.2762481E 00     | 3.0616546E-01     | 2.5824135E 00  |
| P115 | 2.4093921E 00     | 2.7098443E-01     | 2.6803766E 00  |
| P116 | 1.3267402E 00     | 1.8761195E-01     | 1.5143521E 00  |
| P117 | 1.5793289E 00     | 1.3833078E-01     | 1.7176597E 00  |
| P118 | 6.5486426E-01     | 7.8056630E-02     | 7.3292089E-01  |
| P119 | 7.0127497E-01     | 8.1935102E-02     | 7.8321007E-01  |
| P120 | 7.9844118E-01     | 6.8386359E-02     | 8.6682754E-01  |
| P121 | -2.1398121E-03    | 3.6983454E-04     | -1.7699776E-03 |
| P122 | 8.8510355E-01     | 5.3411189E-02     | 9.3851473E-01  |
| P123 | 2.8206495E-01     | 2.6679288E-02     | 3.0874424E-01  |
| P124 | 3.6472572E-01     | 1.6057929E-02     | 3.8078365E-01  |
| P125 | -5.8652738E-02    | 0.                | -5.8652738E-02 |
| P126 | -7.8772870E-02    | 0.                | -7.8772870E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 225

| PT   | SI.0<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 4.0452175E 00     | 9.3467504E-01      | 4.9798926E 00  |
| P101 | 4.1461266E 00     | 1.1969668E 00      | 5.3430933E 00  |
| P102 | 4.2394974E 00     | 1.4396642E 00      | 5.6791616E 00  |
| P103 | 3.4183437E 00     | 7.6997116E-01      | 4.1883149E 00  |
| P104 | 3.4975229E 00     | 9.4643819E-01      | 4.4439611E 00  |
| P105 | 3.5795717E 00     | 2.2119985E 00      | 5.7915702E 00  |
| P106 | 2.7364977E 00     | 4.8503194E-01      | 3.2215297E 00  |
| P107 | 2.8490562E 00     | 6.9683641E-01      | 3.5458926E 00  |
| P108 | 2.9604385E 00     | 9.0906405E-01      | 3.8695026E 00  |
| P109 | 2.0625127E 00     | 2.1609935E-01      | 2.2786120E 00  |
| P110 | 2.2119985E 00     | 4.7573006E-01      | 2.6877286E 00  |
| P111 | 2.3596658E 00     | 7.3830396E-01      | 3.0979697E 00  |
| P112 | 1.4006869E 00     | -5.1890409E-02     | 1.3487965E 00  |
| P113 | 1.4421377E 00     | 4.3669497E-03      | 1.4465047E 00  |
| P114 | 1.6291811E 00     | 2.9067799E-01      | 1.9198591E 00  |
| P115 | 1.7876316E 00     | 5.7885106E-01      | 2.3664826E 00  |
| P116 | 8.9784997E-01     | -6.2097088E-02     | 8.3575288E-01  |
| P117 | 1.1860961E 00     | 3.8652180E-01      | 1.5726179E 00  |
| P118 | 4.2890445E-01     | -9.0874346E-02     | 3.3803011E-01  |
| P119 | 4.6617142E-01     | -6.7206103E-02     | 3.9896532E-01  |
| P120 | 5.7320147E-01     | 7.5655815E-02      | 6.4885728E-01  |
| P121 | -2.4525932E-03    | -3.4534358E-03     | -5.9060290E-03 |
| P122 | 6.7253147E-01     | 2.1552310E-01      | 8.8805457E-01  |
| P123 | 1.8585109E-01     | -3.0407844E-02     | 1.5544324E-01  |
| P124 | 2.7869045E-01     | 8.7571722E-02      | 3.6626217E-01  |
| P125 | -3.8535798E-02    | 0.                 | -3.8535798E-02 |
| P126 | -5.9972100E-02    | 0.                 | -5.9972100E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 226

| PT   | S1.0<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 4.0452175E 00     | -2.0063176E 00     | 2.0389000E 00  |
| P101 | 4.1461266E 00     | -2.3428167E 00     | 1.8033099E 00  |
| P102 | 4.2394974E 00     | -2.6541779E 00     | 1.5853195E 00  |
| P103 | 3.4183437E 00     | -1.6551659E 00     | 1.7631778E 00  |
| P104 | 3.4975229E 00     | -1.8807217E 00     | 1.6168012E 00  |
| P105 | 3.5795717E 00     | 2.3596658E 00      | 5.9492375E 00  |
| P106 | 2.7364977E 00     | -1.1529796E 00     | 1.5835181E 00  |
| P107 | 2.8490562E 00     | -1.4248317E 00     | 1.4242245E 00  |
| P108 | 2.9604385E 00     | -1.6976949E 00     | 1.2627436E 00  |
| P109 | 2.0625127E 00     | -6.7861999E-01     | 1.3838927E 00  |
| P110 | 2.2119985E 00     | -1.0141456E 00     | 1.1978529E 00  |
| P111 | 2.3596658E 00     | -1.3537211E 00     | 1.0059447E 00  |
| P112 | 1.4006869E 00     | -2.1477507E-01     | 1.1859118E 00  |
| P113 | 1.4421377E 00     | -2.9011854E-01     | 1.1520192E 00  |
| P114 | 1.6291811E 00     | -6.6589110E-01     | 9.6328995E-01  |
| P115 | 1.7876316E 00     | -1.0366435E 00     | 7.5098807E-01  |
| P116 | 8.9784997E-01     | -9.5542939E-02     | 8.0230702E-01  |
| P117 | 1.1860961E 00     | -6.8022718E-01     | 5.0586896E-01  |
| P118 | 4.2890445E-01     | 3.5434536E-02      | 4.6433898E-01  |
| P119 | 4.6617142E-01     | -1.5557600E-03     | 4.6461566E-01  |
| P120 | 5.7320147E-01     | -1.9096424E-01     | 3.8223723E-01  |
| P121 | -2.4525932E-03    | 4.5398335E-03      | 2.0872403E-03  |
| P122 | 6.7253147E-01     | -3.7483512E-01     | 2.9769636E-01  |
| P123 | 1.8585109E-01     | 7.6544493E-03      | 1.9350553E-01  |
| P124 | 2.7869045E-01     | -1.5063303E-01     | 1.2805741E-01  |
| P125 | -3.8535798E-02    | 0.                 | -3.8535798E-02 |
| P126 | -5.9972100E-02    | 0.                 | -5.9972100E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 227

| PT   | S1.0<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 4.0452175E 00     | 1.8200448E 00      | 5.8652623E 00  |
| P101 | 4.1461266E 00     | 1.9295767E 00      | 6.0757033E 00  |
| P102 | 4.2394974E 00     | 2.0309263E 00      | 6.2704237E 00  |
| P103 | 3.4183437E 00     | 1.4742053E 00      | 4.8925490E 00  |
| P104 | 3.4975229E 00     | 1.5434679E 00      | 5.0409908E 00  |
| P105 | 3.5795717E 00     | 1.4006869E 00      | 4.9802586E 00  |
| P106 | 2.7364977E 00     | 1.0891553E 00      | 3.8256530E 00  |
| P107 | 2.8490562E 00     | 1.1727344E 00      | 4.0217906E 00  |
| P108 | 2.9604385E 00     | 1.2567810E 00      | 4.2172195E 00  |
| P109 | 2.0625127E 00     | 7.3145066E-01      | 2.7934633E 00  |
| P110 | 2.2119985E 00     | 8.3726473E-01      | 3.0492632E 00  |
| P111 | 2.3596658E 00     | 9.4569621E-01      | 3.3053620E 00  |
| P112 | 1.4006869E 00     | 4.0142918E-01      | 1.8021161E 00  |
| P113 | 1.4421377E 00     | 4.2974611E-01      | 1.8718838E 00  |
| P114 | 1.6291811E 00     | 5.5718169E-01      | 2.1863627E 00  |
| P115 | 1.7876316E 00     | 6.7237028E-01      | 2.4600019E 00  |
| P116 | 8.9784997E-01     | 2.1401359E-01      | 1.1118636E 00  |
| P117 | 1.1860961E 00     | 4.0477889E-01      | 1.5908750E 00  |
| P118 | 4.2890445E-01     | 5.6906791E-02      | 4.8581124E-01  |
| P119 | 4.6617142E-01     | 7.4761599E-02      | 5.4093302E-01  |
| P120 | 5.7320147E-01     | 1.3872835E-01      | 7.1192981E-01  |
| P121 | -2.4525932E-03    | -1.4961145E-03     | -3.9487077E-03 |
| P122 | 6.7253147E-01     | 1.9932696E-01      | 8.7185843E-01  |
| P123 | 1.8585109E-01     | 2.0516084E-02      | 2.0636717E-01  |
| P124 | 2.7869045E-01     | 7.4551229E-02      | 3.5324167E-01  |
| P125 | -3.8535798E-02    | 0.                 | -3.8535798E-02 |
| P126 | -5.9972100E-02    | 0.                 | -5.9972100E-02 |

## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 228

| PT   | S1.0<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|------|-------------------|--------------------|----------------|
| P100 | 4.0452175E 00     | -2.2029353E 00     | 1.8422822E 00  |
| P101 | 4.1461266E 00     | -2.3347839E 00     | 1.8113427E 00  |
| P102 | 4.2394974E 00     | -2.4567827E 00     | 1.7827147E 00  |
| P103 | 3.4183437E 00     | -1.7846531E 00     | 1.6336906E 00  |
| P104 | 3.4975229E 00     | -1.8671481E 00     | 1.6303743E 00  |
| P105 | 3.5795717E 00     | 1.4421377E 00      | 5.0217094E 00  |
| P106 | 2.7364977E 00     | -1.3200512E 00     | 1.4164466E 00  |
| P107 | 2.8490562E 00     | -1.4184611E 00     | 1.4305951E 00  |
| P108 | 2.9604385E 00     | -1.5175263E 00     | 1.4429123E 00  |
| P109 | 2.0625127E 00     | -8.8922329E-01     | 1.1732894E 00  |
| P110 | 2.2119985E 00     | -1.0130847E 00     | 1.1989138E 00  |
| P111 | 2.3596658E 00     | -1.1399089E 00     | 1.2197569E 00  |
| P112 | 1.4006869E 00     | -4.9305958E-01     | 9.0762728E-01  |
| P113 | 1.4421377E 00     | -5.2642125E-01     | 9.1571645E-01  |
| P114 | 1.6291811E 00     | -6.7511676E-01     | 9.5406429E-01  |
| P115 | 1.7876316E 00     | -8.0806494E-01     | 9.7956662E-01  |
| P116 | 8.9784997E-01     | -2.6662888E-01     | 6.3122109E-01  |
| P117 | 1.1860961E 00     | -4.8361832E-01     | 7.0247782E-01  |
| P118 | 4.2890445E-01     | -7.5558673E-02     | 3.5334578E-01  |
| P119 | 4.6617142E-01     | -9.7552232E-02     | 3.6861919E-01  |
| P120 | 5.7320147E-01     | -1.7070141E-01     | 4.0250006E-01  |
| P121 | -2.4525932E-03    | 1.7000032E-03      | -7.5259004E-04 |
| P122 | 6.7253147E-01     | -2.3955881E-01     | 4.3297267E-01  |
| P123 | 1.8585109E-01     | -2.7926972E-02     | 1.5792412E-01  |
| P124 | 2.7869045E-01     | -8.9887096E-02     | 1.8880335E-01  |
| P125 | -3.8535798E-02    | 0.                 | -3.8535798E-02 |
| P126 | -5.9972100E-02    | 0.                 | -5.9972100E-02 |



## DEFLECTIONS OF REDUNDANT STRUCTURE

PAGE 229

| PT   | S1.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|------|-------------------|-------------------|----------------|
| P100 | 4.0452175E 00     | 1.0655548E 00     | 5.1107723E 00  |
| P101 | 4.1461266E 00     | 1.0430986E 00     | 5.1892252E 00  |
| P102 | 4.2394974E 00     | 1.0223199E 00     | 5.2618173E 00  |
| P103 | 3.4183437E 00     | 8.5134076E-01     | 4.2696844E 00  |
| P104 | 3.4975229E 00     | 8.3130521E-01     | 4.3288281E 00  |
| P105 | 3.5795717E 00     | 1.6291811E 00     | 5.2087528E 00  |
| P106 | 2.7364977E 00     | 6.5809642E-01     | 3.3945941E 00  |
| P107 | 2.8490562E 00     | 6.3308544E-01     | 3.4821416E 00  |
| P108 | 2.9604385E 00     | 6.0822614E-01     | 3.5686646E 00  |
| P109 | 2.0625127E 00     | 4.8236250E-01     | 2.5448751E 00  |
| P110 | 2.2119985E 00     | 4.5352597E-01     | 2.6655245E 00  |
| P111 | 2.3596658E 00     | 4.2558450E-01     | 2.7852503E 00  |
| P112 | 1.4006869E 00     | 3.3179282E-01     | 1.7324797E 00  |
| P113 | 1.4421377E 00     | 3.3001495E-01     | 1.7721526E 00  |
| P114 | 1.6291811E 00     | 3.0616546E-01     | 1.9353465E 00  |
| P115 | 1.7876316E 00     | 2.7098443E-01     | 2.0586160E 00  |
| P116 | 8.9784997E-01     | 1.8761195E-01     | 1.0854619E 00  |
| P117 | 1.1860961E 00     | 1.3833078E-01     | 1.3244269E 00  |
| P118 | 4.2890445E-01     | 7.8056630E-02     | 5.0696108E-01  |
| P119 | 4.6617142E-01     | 8.1935102E-02     | 5.4810652E-01  |
| P120 | 5.7320147E-01     | 6.8386359E-02     | 6.4158782E-01  |
| P121 | -2.4525932E-03    | 3.6983454E-04     | -2.0827587E-03 |
| P122 | 6.7253147E-01     | 5.3411189E-02     | 7.2594266E-01  |
| P123 | 1.8585109E-01     | 2.6679288E-02     | 2.1253037E-01  |
| P124 | 2.7869045E-01     | 1.6057929E-02     | 2.9474837E-01  |
| P125 | -3.8535798E-02    | 0.                | -3.8535798E-02 |
| P126 | -5.9972100E-02    | 0.                | -5.9972100E-02 |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

PAGE 230

| PT |     | S3.0<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|----|-----|-------------------|--------------------|----------------|
| 1  | Q1  | -4.8353015E 01    | -1.0540874E 02     | -1.5376176E 02 |
| 2  | Q2  | -7.4897924E 01    | -2.0359539E 01     | -9.5257463E 01 |
| 3  | Q3  | -1.8516039E 02    | -2.0313323E 01     | -2.0547371E 02 |
| 4  | Q4  | -2.8309546E 02    | -1.6397441E 00     | -2.8473521E 02 |
| 5  | Q5  | -4.0274503E 02    | -1.4877550E 02     | -5.5152054E 02 |
| 6  | Q6  | -4.0482795E 02    | -1.4187433E 02     | -5.4670228E 02 |
| 7  | Q7  | -5.1519803E 02    | -1.4558878E 02     | -6.6078682E 02 |
| 8  | Q8  | -5.0108809E 02    | -1.8232240E 02     | -6.8341048E 02 |
| 9  | Q9  | 1.0181339E-05     | 4.6365979E 02      | 4.6365981E 02  |
| 10 | Q10 | 2.9392785E 01     | -4.6848817E 01     | -1.7456032E 01 |
|    |     |                   |                    |                |
| 11 | Q11 | 1.0147934E 02     | 6.5301719E 01      | 1.6678106E 02  |
| 12 | Q12 | 1.5832605E 02     | 1.8500766E 01      | 1.7682682E 02  |
| 13 | Q13 | 2.3376145E 02     | 8.4755386E 01      | 3.1851684E 02  |
| 14 | Q14 | 2.3683846E 02     | 1.2863191E 02      | 3.6547037E 02  |
| 15 | Q15 | 3.3058700E 02     | 8.5204673E 01      | 4.1579167E 02  |
| 16 | Q16 | 6.7164624E 02     | -6.1053920E 01     | 6.1059232E 02  |
| 17 | Q17 | 7.2339464E 02     | -1.2622818E 02     | 5.9716647E 02  |
| 18 | Q18 | -6.5409315E-06    | -4.0693379E 00     | -4.0693444E 00 |
| 19 | Q25 | -2.0360514E 01    | -1.2111080E 02     | -1.4147132E 02 |
| 20 | Q30 | -1.9954476E 02    | -1.3253740E 02     | -3.3208216E 02 |
|    |     |                   |                    |                |
| 21 | Q31 | 2.7293268E 01     | 1.4000876E 02      | 1.6730203E 02  |
| 22 | Q32 | -7.7953263E 00    | 1.6024214E 02      | 1.5244681E 02  |
| 23 | Q33 | 1.5311424E 01     | 1.1897854E 01      | 2.7209278E 01  |
| 24 | Q34 | -4.1934851E 01    | 1.8976488E 01      | -2.2958363E 01 |
| 25 | Q35 | 3.7344207E 01     | 8.8936539E 01      | 1.2628074E 02  |
| 26 | Q36 | -4.9138118E 01    | 7.2464811E 01      | 2.3326693E 01  |
| 27 | Q37 | -5.4961796E 01    | -8.5120282E 01     | -1.4008208E 02 |
| 28 | Q38 | -4.1648168E 01    | -7.1522223E 01     | -1.1317039E 02 |
| 29 | P40 | -1.3489046E 03    | -2.7860372E 03     | -4.1349418E 03 |
| 30 | P41 | -2.5397277E 03    | -1.5174963E 03     | -4.0572239E 03 |
|    |     |                   |                    |                |
| 31 | P42 | -5.8587934E 03    | -7.7608559E 02     | -6.6348790E 03 |
| 32 | P43 | -1.1591477E 04    | 6.6101754E 02      | -1.0930459E 04 |
| 33 | P44 | -1.1585681E 04    | 6.6068715E 02      | -1.0924994E 04 |
| 34 | P45 | -1.9514522E 04    | -2.2682559E 03     | -2.1782778E 04 |
| 35 | P46 | -2.7484775E 04    | -5.0614777E 03     | -3.2546253E 04 |
| 36 | P47 | -3.7015938E 04    | -7.7548704E 03     | -4.4770808E 04 |
| 37 | P48 | -4.6286069E 04    | -1.1127834E 04     | -5.7413903E 04 |
| 38 | P49 | -4.6286069E 04    | 1.9921554E-05      | -4.6286069E 04 |
| 39 | P50 | 5.0871991E 02     | 2.2462645E 03      | 2.7553844E 03  |
| 40 | P51 | -1.0897857E 03    | -6.6779217E 02     | -1.7575778E 03 |
|    |     |                   |                    |                |
| 41 | P52 | -3.9553370E 03    | -2.1821747E 03     | -6.1375117E 03 |
| 42 | P53 | -9.3876642E 03    | -6.5829456E 03     | -1.5970610E 04 |
| 43 | P54 | -7.9052979E 03    | -5.5434601E 03     | -1.3448758E 04 |
| 44 | P55 | -1.4271973E 04    | -4.4015782E 03     | -1.8673572E 04 |
| 45 | P56 | -2.2575486E 04    | -2.4626297E 03     | -2.4938115E 04 |
| 46 | P57 | -2.1516697E 04    | -2.2518222E 03     | -2.3768519E 04 |
| 47 | P58 | -3.0250574E 04    | 1.3296173E 03      | -2.8920957E 04 |
| 48 | P59 | -3.9941798E 04    | 6.1167808E 03      | -3.3875017E 04 |
| 49 | P60 | -3.9941798E 04    | 2.6852725E-05      | -3.9941798E 04 |
| 50 | P62 | 5.2264007E 02     | 9.7664125E 01      | 6.2030619E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

PAGE 231

| PT     | S3.0<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 5.2253534E 02     | 9.7644585E 01      | 6.2017992E 02  |
| 52 P64 | 1.1658520E 02     | -7.9842802E 01     | 3.6742399E 01  |
| 53 P67 | 6.1038893E 02     | -7.8798787E 01     | 5.3159015E 02  |
| 54 P68 | 6.1026664E 02     | -7.8787011E 01     | 5.3148363E 02  |
| 55 P69 | 2.2234281E 02     | -2.8701252E 01     | 1.9364156E 02  |
| 56 P72 | -1.8918838E 02    | -5.0369432E 02     | -6.9288670E 02 |
| 57 P73 | -1.8915050E 02    | -5.0359746E 02     | -6.9276796E 02 |
| 58 P74 | 3.7950022E 02     | 6.4622294E 01      | 4.4412251E 02  |
| 59 P77 | 4.2672430E 03     | -4.4757466E 02     | 3.8196684E 03  |
| 60 P79 | 2.9254092E 03     | 5.2738956E 01      | 2.9781482E 03  |
| 61 P80 | 2.9248229E 03     | 5.2728381E 01      | 2.9775513E 03  |
| 62 P81 | -6.0406273E 01    | -5.8798329E 01     | -1.1920460E 02 |
| 63 P82 | 4.4098905E 02     | 2.1600464E 02      | 6.5699369E 02  |
| 64 P83 | -5.9113560E 02    | 3.0393402E 02      | -2.8720159E 02 |
| 65 P84 | -1.2465348E 03    | 3.2538471E 01      | -1.2139963E 03 |
| 66 P93 | -4.2136093E 02    | -2.4567849E 01     | -4.4592878E 02 |
| 67 P94 | -1.0128251E 03    | -4.5102922E 02     | -1.4638543E 03 |
| 68 P95 | -1.3081394E 03    | -6.5612582E 02     | -1.9642652E 03 |
| 69 P96 | 4.9607722E 03     | 6.3952236E 03      | 1.1355996E 04  |
| 70 P97 | 7.0169286E 03     | -1.1849407E 03     | 5.8319879E 03  |
| 71 Q19 | 5.3190488E 01     | 5.8249201E 01      | 1.1143969E 02  |
| 72 Q20 | 3.0236621E 01     | 5.6910854E 01      | 8.7147474E 01  |
| 73 Q21 | 2.6701934E 01     | -7.1035326E 01     | -4.4333392E 01 |
| 74 Q22 | -5.5184013E 00    | -7.4267039E 01     | -9.9785441E 01 |
| 75 Q23 | 2.4289637E 01     | -5.2334628E 01     | -2.8044991E 01 |
| 76 Q24 | 8.2031403E 00     | -6.3506744E 01     | -5.5303604E 01 |
| 77 Q26 | 5.0901096E 01     | -8.5367994E 01     | -3.4466899E 01 |
| 78 Q28 | 7.1397524E 01     | -1.8391396E 02     | -1.1251644E 02 |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | 53.0<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -4.8353015E 01    | 1.4496757E 02      | 9.6614554E 01  |
| 2 Q2   | -7.4897924E 01    | 4.3047649E 01      | -3.1850275E 01 |
| 3 Q3   | -1.8516039E 02    | 5.0046958E 01      | -1.3511343E 02 |
| 4 Q4   | -2.8309546E 02    | 3.4178314E 01      | -2.4891715E 02 |
| 5 Q5   | -4.0274503E 02    | 2.3102986E 02      | -1.7171517E 02 |
| 6 Q6   | -4.0482795E 02    | 2.1968652E 02      | -1.8514143E 02 |
| 7 Q7   | -5.1519803E 02    | 2.3442045E 02      | -2.6077759E 02 |
| 8 Q8   | -5.0108809E 02    | 2.3011406E 02      | -2.2097403E 02 |
| 9 Q9   | 1.0181339E-05     | -8.0228479E 02     | -8.0228478E 02 |
| 10 Q10 | 2.9392785E 01     | 5.5349714E 01      | 8.4742498E 01  |
| 11 Q11 | 1.0147934E 02     | -9.6284728E 01     | 5.1946163E 00  |
| 12 Q12 | 1.5832605E 02     | -4.4128879E 01     | 1.1419717E 02  |
| 13 Q13 | 2.3376145E 02     | -1.3508118E 02     | 9.8680278E 01  |
| 14 Q14 | 2.3683846E 02     | -1.8861921E 02     | 4.8219252E 01  |
| 15 Q15 | 3.3058700E 02     | -1.4559719E 02     | 1.8498981E 02  |
| 16 Q16 | 6.7164674E 02     | -2.3977704E 01     | 6.4766854E 02  |
| 17 Q17 | 7.2339464E 02     | 5.2613994E 01      | 7.7600864E 02  |
| 18 Q18 | -6.5409315E-06    | 7.9705105E 00      | 7.9705040E 00  |
| 19 Q25 | -2.0360514E 01    | 1.5231504E 02      | 1.3195452E 02  |
| 20 Q30 | -1.9954476E 02    | 1.9103079E 02      | -8.5139713E 00 |
| 21 Q31 | 2.7293268E 01     | -1.7751692E 02     | -1.5022365E 02 |
| 22 Q32 | -7.7953263E 00    | -1.9806925E 02     | -2.0586458E 02 |
| 23 Q33 | 1.5311424E 01     | -1.3949986E 01     | 1.3614379E 00  |
| 24 Q34 | -4.1934851E 01    | -1.6709819E 01     | -5.8644669E 01 |
| 25 Q35 | 3.7344207E 01     | -1.1292153E 02     | -7.5577321E 01 |
| 26 Q36 | -4.9138118E 01    | -8.2993039E 01     | -1.3213116E 02 |
| 27 Q37 | -5.4961796E 01    | 1.1337843E 02      | 5.8416636E 01  |
| 28 Q38 | -4.1648168E 01    | 9.1916910E 01      | 5.0267743E 01  |
| 29 P40 | -1.3489046E 03    | 3.7010760E 03      | 2.3521714E 03  |
| 30 P41 | -2.5397277E 03    | 2.3878279E 03      | -1.5189978E 02 |
| 31 P42 | -5.8587934E 03    | 1.9327291E 03      | -3.9260643E 03 |
| 32 P43 | -1.1591477E 04    | 8.6290494E 02      | -1.0728572E 04 |
| 33 P44 | -1.1585681E 04    | 8.6247333E 02      | -1.0723208E 04 |
| 34 P45 | -1.9514522E 04    | 5.4107578E 03      | -1.4103765E 04 |
| 35 P46 | -2.7484775E 04    | 9.7359459E 03      | -1.7748829E 04 |
| 36 P47 | -3.7015938E 04    | 1.4072725E 04      | -2.2943213E 04 |
| 37 P48 | -4.6286069E 04    | 1.9254835E 04      | -2.7031235E 04 |
| 38 P49 | -4.6286069E 04    | -2.0961867E-05     | -4.6286069E 04 |
| 39 P50 | 5.0871991E 02     | -2.8336464E 03     | -2.3249265E 02 |
| 40 P51 | -1.0897857E 03    | 1.0548714E 03      | -3.4914261E 01 |
| 41 P52 | -3.9553370E 03    | 3.3075199E 03      | -6.4781713E 02 |
| 42 P53 | -9.3876642E 03    | 9.4511458E 03      | 6.3451567E 01  |
| 43 P54 | -7.9052979E 03    | 7.9587550E 03      | 5.3457153E 01  |
| 44 P55 | -1.4271973E 04    | 7.7620555E 03      | -6.9099180E 03 |
| 45 P56 | -2.2575486E 04    | 5.8766488E 03      | -1.6698837E 04 |
| 46 P57 | -2.1516697E 04    | 5.6010337E 03      | -1.5915663E 04 |
| 47 P58 | -3.0250574E 04    | 2.5105518E 03      | -2.7740022E 04 |
| 48 P59 | -3.9941798E 04    | -1.9968771E 03     | -4.1938674E 04 |
| 49 P60 | -3.9941798E 04    | -2.9057250E-05     | -3.9941798E 04 |
| 50 P62 | 5.2264007E 02     | -1.9129227E 02     | 3.3134780E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S3.0<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 5.2253534E 02     | -1.9125397E 02     | 3.3128137E 02  |
| 52 P64 | 1.1658520E 02     | 8.3260884E 01      | 2.0054608E 02  |
| 53 P67 | 6.1038893E 02     | 5.0864359E 01      | 6.6125329E 02  |
| 54 P68 | 6.1026664E 02     | 5.0854187E 01      | 6.6112083E 02  |
| 55 P69 | 2.2234281E 02     | 1.2005733E 01      | 2.3434854E 02  |
| 56 P72 | -1.8918838E 02    | 7.0633706E 02      | 5.1715068E 02  |
| 57 P73 | -1.8915050E 02    | 7.0619760E 02      | 5.1704710E 02  |
| 58 P74 | 3.7950022E 02     | -1.2197190E 02     | 2.5752831E 02  |
| 59 P77 | 4.2672430E 03     | -4.0337949E 01     | 4.2269051E 03  |
| 60 P79 | 2.9254092E 03     | -4.4762934E 02     | 2.4777799E 03  |
| 61 P80 | 2.9248229E 03     | -4.4753962E 02     | 2.4772833E 03  |
| 62 P81 | -6.0406273E 01    | 9.4896653E 01      | 3.4490380E 01  |
| 63 P82 | 4.4098905E 02     | -3.3272498E 02     | 1.0826407E 02  |
| 64 P83 | -5.9113560E 02    | -2.0669116E 02     | -7.9782676E 02 |
| 65 P84 | -1.2465348E 03    | 6.4912245E 01      | -1.1816226E 03 |
| 66 P93 | -4.2136093E 02    | 1.2011321E 02      | -3.0124773E 02 |
| 67 P94 | -1.0128251E 03    | 7.4317044E 02      | -2.6965464E 02 |
| 68 P95 | -1.3081394E 03    | 1.0244380E 03      | -2.8370141E 02 |
| 69 P96 | 4.9607722E 03     | -1.0715749E 04     | -5.7549767E 03 |
| 70 P97 | 7.0169286E 03     | 4.3304182E 02      | 7.4499704E 03  |
| 71 Q19 | 5.3190488E 01     | -7.7207076E 01     | -2.4016588E 01 |
| 72 Q20 | 3.0236621E 01     | -7.0663846E 01     | -4.0427225E 01 |
| 73 Q21 | 2.6701934E 01     | 8.5618480E 01      | 1.1232041E 02  |
| 74 Q22 | -5.5184013E 00    | 1.1955986E 02      | 1.1404146E 02  |
| 75 Q23 | 2.4289637E 01     | 6.1238971E 01      | 8.5528607E 01  |
| 76 Q24 | 8.2031403E 00     | 7.6560308E 01      | 8.4763448E 01  |
| 77 Q26 | 5.0901096E 01     | 9.6508223E 01      | 1.4740932E 02  |
| 78 Q28 | 7.1397524E 01     | 2.1750780E 02      | 2.8890533E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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|    |     | S3.0        |     | +07.05      |     |             |    |
|----|-----|-------------|-----|-------------|-----|-------------|----|
| PT |     | SYMMETRIC   |     | ANTI-SYM    |     | S + AS      |    |
| 1  | Q1  | -4.8353015E | 01  | -7.9665509E | 01  | -1.2801852E | 02 |
| 2  | Q2  | -7.4897924E | 01  | -5.7994899E | 01  | -1.3269282E | 02 |
| 3  | Q3  | -1.8516039E | 02  | -7.2683263E | 01  | -2.5784365E | 02 |
| 4  | Q4  | -2.8309546E | 02  | -7.7886168E | 01  | -3.6098163E | 02 |
| 5  | Q5  | -4.0274503E | 02  | -1.3346976E | 02  | -5.3621479E | 02 |
| 6  | Q6  | -4.0482795E | 02  | -1.5442388E | 02  | -5.5925683E | 02 |
| 7  | Q7  | -5.1519803E | 02  | -1.7311279E | 00  | -5.1692923E | 02 |
| 8  | Q8  | -5.0108809E | 02  | -1.1544831E | 01  | -5.1263292E | 02 |
| 9  | Q9  | 1.0181339E  | -05 | 4.1504359E  | 02  | 4.1504360E  | 02 |
| 10 | Q10 | 2.9392785E  | 01  | -1.1906391E | 01  | 1.7486394E  | 01 |
|    |     |             |     |             |     |             |    |
| 11 | Q11 | 1.0147934E  | 02  | 5.5209443E  | 01  | 1.5668879E  | 02 |
| 12 | Q12 | 1.5832605E  | 02  | 5.4700370E  | 01  | 2.1302642E  | 02 |
| 13 | Q13 | 2.3376145E  | 02  | 9.6020169E  | 01  | 3.2978162E  | 02 |
| 14 | Q14 | 2.3683846E  | 02  | 1.1455131E  | 02  | 3.5138977E  | 02 |
| 15 | Q15 | 3.3058700E  | 02  | 1.2920626E  | 02  | 4.5979326E  | 02 |
| 16 | Q16 | 6.7164624E  | 02  | 9.8153043E  | 00  | 6.8146154E  | 02 |
| 17 | Q17 | 7.2339464E  | 02  | -6.7627921E | 00  | 7.1663185E  | 02 |
| 18 | Q18 | -6.5409315E | -06 | -7.6764398E | 00  | -7.6764463E | 00 |
| 19 | Q25 | -2.0360514E | 01  | -4.6833497E | 01  | -6.7194011E | 01 |
| 20 | Q30 | -1.9954476E | 02  | -9.1351180E | 01  | -2.9089594E | 02 |
|    |     |             |     |             |     |             |    |
| 21 | Q31 | 2.7293268E  | 01  | 5.3823454E  | 01  | 8.1116722E  | 01 |
| 22 | Q32 | -7.7953263E | 00  | 5.1147013E  | 01  | 4.3351687E  | 01 |
| 23 | Q33 | 1.5311424E  | 01  | 3.4129132E  | -01 | 1.5652715E  | 01 |
| 24 | Q34 | -4.1934851E | 01  | -1.0086593E | 01  | -5.2021444E | 01 |
| 25 | Q35 | 3.7344207E  | 01  | 3.3400918E  | 01  | 7.0745125E  | 01 |
| 26 | Q36 | -4.9138118E | 01  | 9.4231141E  | 00  | -3.9715004E | 01 |
| 27 | Q37 | -5.4961796E | 01  | -4.9798575E | 01  | -1.0476037E | 02 |
| 28 | Q38 | -4.1648168E | 01  | -2.4465424E | 01  | -6.6113591E | 01 |
| 29 | P40 | -1.3489046E | 03  | -1.5349053E | 03  | -2.8838099E | 03 |
| 30 | P41 | -2.5397277E | 03  | -1.8364288E | 03  | -4.3761564E | 03 |
|    |     |             |     |             |     |             |    |
| 31 | P42 | -5.8587934E | 03  | -2.7966869E | 03  | -8.6554803E | 03 |
| 32 | P43 | -1.1591477E | 04  | -4.0494495E | 03  | -1.5640926E | 04 |
| 33 | P44 | -1.1585681E | 04  | -4.0474249E | 03  | -1.5634106E | 04 |
| 34 | P45 | -1.9514522E | 04  | -6.6750138E | 03  | -2.6189566E | 04 |
| 35 | P46 | -2.7484775E | 04  | -9.7154397E | 03  | -3.7290215E | 04 |
| 36 | P47 | -3.7015938E | 04  | -9.7474668E | 03  | -4.6763405E | 04 |
| 37 | P48 | -4.6286069E | 04  | -9.9610465E | 03  | -5.6247115E | 04 |
| 38 | P49 | -4.6286069E | 04  | 3.2965446E  | -05 | -4.6286069E | 04 |
| 39 | P50 | 5.0871991E  | 02  | 7.6624269E  | 02  | 1.2749624E  | 03 |
| 40 | P51 | -1.0897857E | 03  | -8.4475118E | 02  | -1.9345368E | 03 |
|    |     |             |     |             |     |             |    |
| 41 | P52 | -3.9553370E | 03  | -2.2121041E | 03  | -6.1674411E | 03 |
| 42 | P53 | -9.3876642E | 02  | -5.2658656E | 03  | -1.4653530E | 04 |
| 43 | P54 | -7.9052979E | 03  | -4.4343550E | 03  | -1.2339653E | 04 |
| 44 | P55 | -1.4271973E | 04  | -5.8155351E | 03  | -2.0087858E | 04 |
| 45 | P56 | -2.2575486E | 04  | -7.5002064E | 03  | -3.0075692E | 04 |
| 46 | P57 | -2.1516697E | 04  | -7.3484668E | 03  | -2.8565144E | 04 |
| 47 | P58 | -3.0250574E | 04  | -5.6400332E | 03  | -3.5890607E | 04 |
| 48 | P59 | -3.9941728E | 04  | -4.8249249E | 02  | -4.3760722E | 04 |
| 49 | P60 | -3.9941728E | 04  | 6.3652648E  | -06 | -3.9941728E | 04 |
| 50 | P62 | 5.2264007E  | 02  | 1.8423457E  | 02  | 7.0687463E  | 02 |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S3.0<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 5.2253534E 02     | 1.8419764E 02      | 7.0673298E 02  |
| 52 P64 | 1.1658520E 02     | 4.7016125E 00      | 1.2128681E 02  |
| 53 P67 | 6.1038893E 02     | 6.9831501E 01      | 6.8022043E 02  |
| 54 P68 | 6.1026664E 02     | 6.9817497E 01      | 6.8008413E 02  |
| 55 P69 | 2.2234281E 02     | 4.0716000E 01      | 2.6305881E 02  |
| 56 P72 | -1.8918838E 02    | -4.7186183E 02     | -6.6105021E 02 |
| 57 P73 | -1.8915050E 02    | -4.7176729E 02     | -6.6091780E 02 |
| 58 P74 | 3.7950022E 02     | 1.0306176E 02      | 4.8256198E 02  |
| 59 P77 | 4.2672430E 03     | 1.1160001E 03      | 5.3832431E 03  |
| 60 P79 | 2.9254092E 03     | 7.1728020E 02      | 3.6426894E 03  |
| 61 P80 | 2.9248229E 03     | 7.1713648E 02      | 3.6419594E 03  |
| 62 P81 | -6.0406273E 01    | -1.2041926E 02     | -1.8082553E 02 |
| 63 P82 | 4.4098905E 02     | 1.4019364E 02      | 5.8118268E 02  |
| 64 P83 | -5.9113560E 02    | 1.1802201E 03      | 5.8908450E 02  |
| 65 P84 | -1.2465348E 03    | 1.2547048E 03      | 8.1699829E 00  |
| 66 P93 | -4.2136093E 02    | -2.6024972E 02     | -6.8161066E 02 |
| 67 P94 | -1.0128251E 03    | -6.3244309E 02     | -1.6452682E 03 |
| 68 P95 | -1.3081394E 03    | -7.6980507E 02     | -2.0779445E 03 |
| 69 P96 | 4.9607722E 03     | 4.2232257E 03      | 9.1839979E 03  |
| 70 P97 | 7.0169286E 03     | 8.8624148E 00      | 7.0257910E 03  |
| 71 Q19 | 5.3190488E 01     | 2.3938109E 01      | 7.7128597E 01  |
| 72 Q20 | 3.0236621E 01     | 9.7608637E 00      | 3.9997485E 01  |
| 73 Q21 | 2.6701934E 01     | -2.0152159E 01     | 6.5497754E 00  |
| 74 Q22 | -5.5184013E 00    | -4.0427594E 01     | -4.5945995E 01 |
| 75 Q23 | 2.4289637E 01     | -9.2576944E 00     | 1.5031942E 01  |
| 76 Q24 | 8.2031403E 00     | -1.6740142E 01     | -8.5370016E 00 |
| 77 Q26 | 5.0901096E 01     | -4.8979445E 00     | 4.6003152E 01  |
| 78 Q28 | 7.1397524E 01     | -4.7665953E 01     | 2.3731571E 01  |

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| PT     | S3.0<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -4.8353015E 01    | 9.8265976E 01      | 4.9912961E 01  |
| 2 Q2   | -7.4897924E 01    | 7.4126036E 01      | -7.7188873E-01 |
| 3 Q3   | -1.8516039E 02    | 9.0365014E 01      | -9.4795372E 01 |
| 4 Q4   | -2.8309546E 02    | 9.9666578E 01      | -1.8342888E 02 |
| 5 Q5   | -4.0274503E 02    | 1.7706911E 02      | -2.2567593E 02 |
| 6 Q6   | -4.0482795E 02    | 1.5401694E 02      | -2.5081101E 02 |
| 7 Q7   | -5.1519803E 02    | 6.5115934E 00      | -5.0868644E 02 |
| 8 Q8   | -5.0108809E 02    | 2.0547189E 01      | -4.8054090E 02 |
| 9 Q9   | 1.0181339E-05     | -4.9948434E 02     | -4.9948432E 02 |
| 10 Q10 | 2.9392785E 01     | 1.5949564E 01      | 4.5342349E 01  |
| 11 Q11 | 1.0147934E 02     | -6.4425308E 01     | 3.7054037E 01  |
| 12 Q12 | 1.5832605E 02     | -6.3323817E 01     | 9.5002235E 01  |
| 13 Q13 | 2.3376145E 02     | -1.1284214E 02     | 1.2091932E 02  |
| 14 Q14 | 2.3683846E 02     | -1.2886747E 02     | 1.0797100E 02  |
| 15 Q15 | 3.3058700E 02     | -1.4371336E 02     | 1.8687364E 02  |
| 16 Q16 | 6.7164624E 02     | -3.5712564E 01     | 6.3593367E 02  |
| 17 Q17 | 7.2339464E 02     | -1.3754571E 01     | 7.0964007E 02  |
| 18 Q18 | -6.5409315E-06    | 9.1661309E 00      | 9.1661245E 00  |
| 19 Q25 | -2.0360514E 01    | 5.8781638E 01      | 3.8421124E 01  |
| 20 Q30 | -1.9954476E 02    | 1.0968952E 02      | -8.9855242E 01 |
| 21 Q31 | 2.7293268E 01     | -6.6824607E 01     | -3.9531359E 01 |
| 22 Q32 | -7.7953263E 00    | -6.4089835E 01     | -7.1885161E 01 |
| 23 Q33 | 1.5311424E 01     | -1.8396554E 00     | 1.3471769E 01  |
| 24 Q34 | -4.1934851E 01    | 1.0747275E 01      | -3.1187576E 01 |
| 25 Q35 | 3.7344207E 01     | -4.1461310E 01     | -4.1171041E 00 |
| 26 Q36 | -4.9138118E 01    | -1.1568982E 01     | -6.0707099E 01 |
| 27 Q37 | -5.4961796E 01    | 6.1828212E 01      | 6.8664150E 00  |
| 28 Q38 | -4.1648168E 01    | 3.2571768E 01      | -9.0764003E 00 |
| 29 P40 | -1.3489046E 03    | 1.8445067E 03      | 4.9560207E 02  |
| 30 P41 | -2.5397277E 03    | 2.2342573E 03      | -3.0547043E 02 |
| 31 P42 | -5.8587934E 03    | 3.3977543E 03      | -2.4610391E 03 |
| 32 P43 | -1.1591477E 04    | 4.9712773E 03      | -6.6201993E 03 |
| 33 P44 | -1.1585681E 04    | 4.9687917E 03      | -6.6168895E 03 |
| 34 P45 | -1.9514522E 04    | 8.4547509E 03      | -1.1059771E 04 |
| 35 P46 | -2.7484775E 04    | 1.1487037E 04      | -1.5997738E 04 |
| 36 P47 | -3.7015938E 04    | 1.1607502E 04      | -2.5408436E 04 |
| 37 P48 | -4.6286069E 04    | 1.1987624E 04      | -3.4298445E 04 |
| 38 P49 | -4.6286069E 04    | -3.2555639E-05     | -4.6286069E 04 |
| 39 P50 | 5.0871991E 02     | -9.0966311E 02     | -4.0094320E 02 |
| 40 P51 | -1.0897857E 03    | 1.0398031E 03      | -4.9982589E 01 |
| 41 P52 | -3.9553370E 03    | 2.6895865E 03      | -1.2657505E 03 |
| 42 P53 | -9.3876642E 03    | 6.2583623E 03      | -3.0293019E 03 |
| 43 P54 | -7.9052979E 03    | 5.3543399E 03      | -2.5509580E 03 |
| 44 P55 | -1.4271973E 04    | 6.8905140E 03      | -7.3814594E 03 |
| 45 P56 | -2.2575486E 04    | 8.7334307E 03      | -1.3842055E 04 |
| 46 P57 | -2.1516697E 04    | 8.3238330E 03      | -1.3192864E 04 |
| 47 P58 | -3.0250574E 04    | 6.9552598E 03      | -2.3295314E 04 |
| 48 P59 | -3.9941798E 04    | 5.1804630E 03      | -3.4761335E 04 |
| 49 P60 | -3.9941798E 04    | -7.4040030E-06     | -3.9941798E 04 |
| 50 P62 | 5.2264007E 02     | -2.1998715E 02     | 3.0265292E 02  |



## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | 53.0<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 5.2253534E 02     | -2.1994306E 02     | 3.0259228E 02  |
| 52 P64 | 1.1658520E 02     | -3.8459961E 00     | 1.1273921E 02  |
| 53 P67 | 6.1038893E 02     | -7.9616043E 01     | 5.3077288E 02  |
| 54 P68 | 6.1026664E 02     | -7.9600077E 01     | 5.3066656E 02  |
| 55 P69 | 2.2234281E 02     | -4.9021001E 01     | 1.7332181E 02  |
| 56 P72 | -1.8918838E 02    | 5.5512822E 02      | 3.6593984E 02  |
| 57 P73 | -1.8915050E 02    | 5.5501700E 02      | 3.6586650E 02  |
| 58 P74 | 3.7950022E 02     | -1.2850037E 02     | 2.5099985E 02  |
| 59 P77 | 4.2672430E 03     | -1.3894314E 03     | 2.8778117E 03  |
| 60 P79 | 2.9254092E 03     | -9.1266559E 02     | 2.0127436E 03  |
| 61 P80 | 2.9248229E 03     | -9.1248270E 02     | 2.0123402E 03  |
| 62 P81 | -6.0406273E 01    | 1.3863659E 02      | 7.8230318E 01  |
| 63 P82 | 4.4098905E 02     | -2.0138631E 02     | 2.3960274E 02  |
| 64 P83 | -5.9113560E 02    | -1.1343993E 03     | -1.7255349E 03 |
| 65 P84 | -1.2465348E 03    | -1.2087861E 03     | -2.4553208E 03 |
| 66 P93 | -4.2136093E 02    | 3.1951507E 02      | -1.0184587E 02 |
| 67 P94 | -1.0128251E 03    | 7.7198526E 02      | -2.4083982E 02 |
| 68 P95 | -1.3081394E 03    | 9.3237008E 02      | -3.7576932E 02 |
| 69 P96 | 4.9607722E 03     | -5.1483127E 03     | -1.8754053E 02 |
| 70 P97 | 7.0169286E 03     | -2.2233076E 02     | 6.7945979E 03  |
| 71 Q19 | 5.3190488E 01     | -2.6604094E 01     | 2.6586394E 01  |
| 72 Q20 | 3.0236621E 01     | -9.1983365E 00     | 2.1038285E 01  |
| 73 Q21 | 2.6701934E 01     | 2.6769897E 01      | 5.3471830E 01  |
| 74 Q22 | -5.5184013E 00    | 5.1418458E 01      | 4.5900056E 01  |
| 75 Q23 | 2.4289637E 01     | 1.3844959E 01      | 3.8134595E 01  |
| 76 Q24 | 8.2031403E 00     | 2.2581515E 01      | 3.0784655E 01  |
| 77 Q26 | 5.0901096E 01     | 7.9902694E 00      | 5.8891366E 01  |
| 78 Q28 | 7.1397524E 01     | 5.4495207E 01      | 1.2589273E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S3.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|-------------------|----------------|
| 1 Q1   | -4.8353015E 01    | -2.5441581E 01    | -7.3794596E 01 |
| 2 Q2   | -7.4897924E 01    | -4.5616471E 01    | -1.2051439E 02 |
| 3 Q3   | -1.8516039E 02    | -5.6575853E 01    | -2.4173624E 02 |
| 4 Q4   | -2.8309546E 02    | -7.0773886E 01    | -3.5386935E 02 |
| 5 Q5   | -4.0274503E 02    | -5.7859182E 01    | -4.6060421E 02 |
| 6 Q6   | -4.0482795E 02    | -4.2855625E 01    | -4.4768357E 02 |
| 7 Q7   | -5.1519803E 02    | 8.7982782E 01     | -4.2721525E 02 |
| 8 Q8   | -5.0108809E 02    | 9.4307739E 01     | -4.0678034E 02 |
| 9 Q9   | 1.0181339E-05     | 1.0309002E 02     | 1.0309003E 02  |
| 10 Q10 | 2.9392785E 01     | 8.5498621E 00     | 3.7942647E 01  |
| 11 Q11 | 1.0147934E 02     | 1.6179562E 01     | 1.1765891E 02  |
| 12 Q12 | 1.5832605E 02     | 3.6031333E 01     | 1.9435738E 02  |
| 13 Q13 | 2.3376145E 02     | 4.1714892E 01     | 2.7547634E 02  |
| 14 Q14 | 2.3683846E 02     | 3.3949550E 01     | 2.7078801E 02  |
| 15 Q15 | 3.3058700E 02     | 6.3664874E 01     | 3.9425187E 02  |
| 16 Q16 | 6.7164624E 02     | 2.0596797E 01     | 6.9224303E 02  |
| 17 Q17 | 7.2339464E 02     | 3.2522914E 01     | 7.5591756E 02  |
| 18 Q18 | -6.5409315E-06    | -4.5847157E 00    | -4.5847222E 00 |
| 19 Q25 | -2.0360514E 01    | 1.0923471E 01     | -9.4370427E 00 |
| 20 Q30 | -1.9954476E 02    | -1.6744550E 01    | -2.1628931E 02 |
| 21 Q31 | 2.7293268E 01     | -1.4157938E 01    | 1.3135329E 01  |
| 22 Q32 | -7.7953263E 00    | -2.4662849E 01    | -3.2458175E 01 |
| 23 Q33 | 1.5311424E 01     | -4.0016121E 00    | 1.1309812E 01  |
| 24 Q34 | -4.1934851E 01    | -1.5758514E 01    | -5.7693365E 01 |
| 25 Q35 | 3.7344207E 01     | -9.8931588E 00    | 2.7451048E 01  |
| 26 Q36 | -4.9138118E 01    | -2.3276033E 01    | -7.2414151E 01 |
| 27 Q37 | -5.4961796E 01    | -7.1728755E 00    | -6.2134672E 01 |
| 28 Q38 | -4.1648168E 01    | 9.0512993E 00     | -3.2596869E 01 |
| 29 P40 | -1.3489046E 03    | -8.6938715E 01    | -1.4358433E 03 |
| 30 P41 | -2.5397277E 03    | -9.4034400E 02    | -3.4800717E 03 |
| 31 P42 | -5.8587934E 03    | -2.1069266E 03    | -7.9657200E 03 |
| 32 P43 | -1.1591477E 04    | -3.8656527E 03    | -1.5457129E 04 |
| 33 P44 | -1.1585681E 04    | -3.8637200E 03    | -1.5449401E 04 |
| 34 P45 | -1.9514522E 04    | -5.0027936E 03    | -2.4517316E 04 |
| 35 P46 | -2.7484775E 04    | -5.8465353E 03    | -3.3331310E 04 |
| 36 P47 | -3.7015938E 04    | -4.2188538E 03    | -4.1234791E 04 |
| 37 P48 | -4.6286069E 04    | -2.4741608E 03    | -4.8760230E 04 |
| 38 P49 | -4.6286069E 04    | 1.9226402E-05     | -4.6286069E 04 |
| 39 P50 | 5.0871991E 02     | -3.5901390E 02    | 1.4970601E 02  |
| 40 P51 | -1.0897857E 03    | -4.6011946E 02    | -1.5499051E 03 |
| 41 P52 | -3.9553370E 03    | -9.5935748E 02    | -4.9146944E 03 |
| 42 P53 | -9.3876642E 03    | -1.6175810E 03    | -1.1005245E 04 |
| 43 P54 | -7.9052979E 03    | -1.3621556E 03    | -9.2674534E 03 |
| 44 P55 | -1.4271973E 04    | -2.9005380E 03    | -1.7172511E 04 |
| 45 P56 | -2.2575486E 04    | -5.0528108E 03    | -2.7628297E 04 |
| 46 P57 | -2.1516697E 04    | -4.8158342E 03    | -2.6332531E 04 |
| 47 P58 | -3.0250574E 04    | -4.8871008E 03    | -3.5137675E 04 |
| 48 P59 | -3.9941798E 04    | -5.1790004E 03    | -4.5120798E 04 |
| 49 P60 | -3.9941798E 04    | -5.3066286E-06    | -3.9941798E 04 |
| 50 P62 | 5.2264007E 02     | 1.1003317E 02     | 6.3267324E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | 53.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|-------------------|----------------|
| 51 P63 | 5.2253534E 02     | 1.1001111E 02     | 6.3254644E 02  |
| 52 P64 | 1.1658520E 02     | 3.6712172E 01     | 1.5329737E 02  |
| 53 P67 | 6.1038893E 02     | 8.7674375E 01     | 6.9806330E 02  |
| 54 P68 | 6.1026664E 02     | 8.7656806E 01     | 6.9792343E 02  |
| 55 P69 | 2.2234281E 02     | 4.6289421E 01     | 2.6863224E 02  |
| 56 P72 | -1.8918838E 02    | -1.8861680E 02    | -3.7780519E 02 |
| 57 P73 | -1.8915050E 02    | -1.8857900E 02    | -3.7772950E 02 |
| 58 P74 | 3.7950022E 02     | 6.0193356E 01     | 4.3969357E 02  |
| 59 P77 | 4.2672430E 03     | 1.1603541E 03     | 5.4275971E 03  |
| 60 P79 | 2.9254092E 03     | 5.9432774E 02     | 3.5197369E 03  |
| 61 P80 | 2.9248229E 03     | 5.9420862E 02     | 3.5190315E 03  |
| 62 P81 | -6.0406273E 01    | -7.9592395E 01    | -1.3999867E 02 |
| 63 P82 | 4.4098905E 02     | 3.7902612E 01     | 4.7889166E 02  |
| 64 P83 | -5.9113560E 02    | 8.7875068E 02     | 2.8761508E 02  |
| 65 P84 | -1.2465348E 03    | 1.0499696E 03     | -1.9656525E 02 |
| 66 P93 | -4.2136093E 02    | -2.2270021E 02    | -6.4406114E 02 |
| 67 P94 | -1.0128251E 03    | -3.5753898E 02    | -1.3703641E 03 |
| 68 P95 | -1.3081394E 03    | -3.8125777E 02    | -1.6893972E 03 |
| 69 P96 | 4.9607722E 03     | 8.6944716E 01     | 5.0477169E 03  |
| 70 P97 | 7.0169286E 03     | 3.5994406E 02     | 7.3768727E 03  |
| 71 Q19 | 5.3190488E 01     | -8.2446572E 00    | 4.4945831E 01  |
| 72 Q20 | 3.0236621E 01     | -2.0376373E 01    | 9.8602483E 00  |
| 73 Q21 | 2.6701934E 01     | 1.1449884E 01     | 3.8151818E 01  |
| 74 Q22 | -5.5184013E 00    | 4.1044679E 00     | -1.4139334E 00 |
| 75 Q23 | 2.4289637E 01     | 1.2679431E 01     | 3.6969067E 01  |
| 76 Q24 | 8.2031403E 00     | 1.1387411E 01     | 1.9590552E 01  |
| 77 Q26 | 5.0901096E 01     | 3.1692695E 01     | 8.2593790E 01  |
| 78 Q28 | 7.1397524E 01     | 4.0529625E 01     | 1.1192715E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -3.7537236E 01    | -1.0540874E 02     | -1.4294598E 02 |
| 2 Q2   | -5.5401971E 01    | -2.0359539E 01     | -7.5761510E 01 |
| 3 Q3   | -1.6137852E 02    | -2.0313323E 01     | -1.8169184E 02 |
| 4 Q4   | -2.4881372E 02    | -1.6397441E 00     | -2.5045367E 02 |
| 5 Q5   | -3.6019143E 02    | -1.4877550E 02     | -5.0896693E 02 |
| 6 Q6   | -3.6631763E 02    | -1.4187433E 02     | -5.0819197E 02 |
| 7 Q7   | -4.8378537E 02    | -1.4558878E 02     | -6.2937415E 02 |
| 8 Q8   | -4.6904244E 02    | -1.8232240E 02     | -6.5137485E 02 |
| 9 Q9   | 9.3548277E-06     | 4.6365979E 02      | 4.6365981E 02  |
| 10 Q10 | 2.5286172E 01     | -4.6848817E 01     | -2.1562645E 01 |
| 11 Q11 | 9.3498979E 01     | 6.5301719E 01      | 1.5880070E 02  |
| 12 Q12 | 1.4231170E 02     | 1.8500766E 01      | 1.6081247E 02  |
| 13 Q13 | 2.1456284E 02     | 8.4755386E 01      | 2.9931822E 02  |
| 14 Q14 | 2.2409895E 02     | 1.2863191E 02      | 3.5273086E 02  |
| 15 Q15 | 3.0122184E 02     | 8.5204673E 01      | 3.8642651E 02  |
| 16 Q16 | 5.9083848E 02     | -6.1053920E 01     | 5.2978457E 02  |
| 17 Q17 | 6.3031434E 02     | -1.2622818E 02     | 5.0408617E 02  |
| 18 Q18 | -5.6825214E-06    | -4.0693379E 00     | -4.0693436E 00 |
| 19 Q25 | -2.3530247E 01    | -1.2111080E 02     | -1.4464105E 02 |
| 20 Q30 | -1.8672948E 02    | -1.3253740E 02     | -3.1926688E 02 |
| 21 Q31 | 3.1591018E 01     | 1.4000876E 02      | 1.7159978E 02  |
| 22 Q32 | 9.8796258E-01     | 1.6024214E 02      | 1.5123010E 02  |
| 23 Q33 | 1.5555802E 01     | 1.1897854E 01      | 2.7453656E 01  |
| 24 Q34 | -3.6230573E 01    | 1.8976488E 01      | -1.7254085E 01 |
| 25 Q35 | 3.9827180E 01     | 8.8936539E 01      | 1.2876372E 02  |
| 26 Q36 | -3.8908220E 01    | 7.2464811E 01      | 3.3556591E 01  |
| 27 Q37 | -5.0719497E 01    | -8.5120282E 01     | -1.3583978E 02 |
| 28 Q38 | -4.1281723E 01    | -7.1522223E 01     | -1.1280395E 02 |
| 29 P40 | -1.2864687E 03    | -2.7860372E 03     | -4.0725058E 03 |
| 30 P41 | -2.1253780E 03    | -1.5174963E 03     | -3.6428742E 03 |
| 31 P42 | -4.9715538E 03    | -7.7608559E 02     | -5.7476394E 03 |
| 32 P43 | -9.9065851E 03    | 6.6101754E 02      | -9.2455677E 03 |
| 33 P44 | -9.9016322E 03    | 6.6068715E 02      | -9.2409450E 03 |
| 34 P45 | -1.6992720E 04    | -2.2682559E 03     | -1.9260976E 04 |
| 35 P46 | -2.4204782E 04    | -5.0614777E 03     | -2.9266259E 04 |
| 36 P47 | -3.3154810E 04    | -7.7548704E 03     | -4.0909680E 04 |
| 37 P48 | -4.1832097E 04    | -1.1127834E 04     | -5.2959930E 04 |
| 38 P49 | -4.1832097E 04    | 1.9921554E-05      | -4.1832097E 04 |
| 39 P50 | 6.3555620E 02     | 2.2466645E 03      | 2.8822207E 03  |
| 40 P51 | -8.8867177E 02    | -6.6779217E 02     | -1.5564639E 03 |
| 41 P52 | -3.4960737E 03    | -2.1821747E 03     | -5.6782485E 03 |
| 42 P53 | -8.5857539E 03    | -6.5829456E 03     | -1.5168700E 04 |
| 43 P54 | -7.2300137E 03    | -5.5434601E 03     | -1.2773474E 04 |
| 44 P55 | -1.2872030E 04    | -4.4015982E 03     | -1.7273628E 04 |
| 45 P56 | -2.0107421E 04    | -2.3626297E 03     | -2.2470051E 04 |
| 46 P57 | -1.9164383E 04    | -2.2518222E 03     | -2.1416205E 04 |
| 47 P58 | -2.6640401E 04    | 1.3296173E 03      | -2.5310784E 04 |
| 48 P59 | -3.4846721E 04    | 6.1167808E 03      | -2.8729940E 04 |
| 49 P60 | -3.4846721E 04    | 2.6852725E-05      | -3.4846721E 04 |
| 50 P62 | 4.7261679E 02     | 9.7664125E 01      | 5.7028111E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 4.7252228E 02     | 9.7644585E 01      | 5.7016686E 02  |
| 52 P64 | 1.0105084E 02     | -7.9842802E 01     | 2.1208040E 01  |
| 53 P67 | 5.7599733E 02     | -7.8798787E 01     | 4.9719854E 02  |
| 54 P68 | 5.7588196E 02     | -7.8783011E 01     | 4.9709895E 02  |
| 55 P69 | 2.0098740E 02     | -2.8701252E 01     | 1.7228615E 02  |
| 56 P72 | -1.3972929E 02    | -5.0369832E 02     | -6.4342761E 02 |
| 57 P73 | -1.3970133E 02    | -5.0359746E 02     | -6.4329879E 02 |
| 58 P74 | 3.4495977E 02     | 6.4622294E 01      | 4.0958206E 02  |
| 59 P77 | 3.6635936E 03     | -4.4757466E 02     | 3.2160189E 03  |
| 60 P79 | 2.5618051E 03     | 5.2738956E 01      | 2.6145440E 03  |
| 61 P80 | 2.5612917E 03     | 5.2728381E 01      | 2.6140201E 03  |
| 62 P81 | -4.1645026E 01    | -5.8798329E 01     | -1.0044335E 02 |
| 63 P82 | 3.8480406E 02     | 2.1600464E 02      | 6.0080870E 02  |
| 64 P83 | -4.8988032E 02    | 3.0393402E 02      | -1.8594630E 02 |
| 65 P84 | -1.2746322E 03    | 3.2538471E 01      | -1.2420937E 03 |
| 66 P93 | -3.2312577E 02    | -2.4567849E 01     | -3.4769362E 02 |
| 67 P94 | -8.5036831E 02    | -4.5102922E 02     | -1.3013975E 03 |
| 68 P95 | -1.1425353E 03    | -6.5612582E 02     | -1.7986611E 03 |
| 69 P96 | 4.6435202E 03     | 6.3952236E 03      | 1.1038744E 04  |
| 70 P97 | 6.1140496E 03     | -1.1849407E 03     | 4.9291088E 03  |
| 71 Q19 | 5.5017220E 01     | 5.8249201E 01      | 1.1326642E 02  |
| 72 Q20 | 3.7414768E 01     | 5.6910854E 01      | 9.4325622E 01  |
| 73 Q21 | 2.2196241E 01     | -7.1035326E 01     | -4.8839085E 01 |
| 74 Q22 | -6.5255859E 00    | -9.4267039E 01     | -1.0079262E 02 |
| 75 Q23 | 2.0350241E 01     | -5.2334628E 01     | -3.1984386E 01 |
| 76 Q24 | 4.4351864E 00     | -6.3506744E 01     | -5.9071558E 01 |
| 77 Q26 | 3.8709988E 01     | -8.5367994E 01     | -4.6658007E 01 |
| 78 Q28 | 4.9053409E 01     | -1.8391396E 02     | -1.3486056E 02 |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | 52.5<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -3.7537236E 01    | 1.4496757E 02      | 1.0743033E 02  |
| 2 Q2   | -5.5401971E 01    | 4.3047649E 01      | -1.2354321E 01 |
| 3 Q3   | -1.6137852E 02    | 5.0046958E 01      | -1.1133156E 02 |
| 4 Q4   | -2.4881392E 02    | 3.4178314E 01      | -2.1463561E 02 |
| 5 Q5   | -3.6019143E 02    | 2.3102986E 02      | -1.2916157E 02 |
| 6 Q6   | -3.6631763E 02    | 2.1968652E 02      | -1.4663111E 02 |
| 7 Q7   | -4.8378537E 02    | 2.3442045E 02      | -2.4936492E 02 |
| 8 Q8   | -4.6904244E 02    | 2.8011406E 02      | -1.8892838E 02 |
| 9 Q9   | 9.3548297E-06     | -8.0228479E 02     | -8.0228478E 02 |
| 10 Q10 | 2.5286172E 01     | 5.5349714E 01      | 8.0635886E 01  |
| 11 Q11 | 9.3498979E 01     | -9.6284728E 01     | -2.7857494E 00 |
| 12 Q12 | 1.4231170E 02     | -4.4128879E 01     | 9.8182822E 01  |
| 13 Q13 | 2.1456284E 02     | -1.3508118E 02     | 7.9481664E 01  |
| 14 Q14 | 2.2409895E 02     | -1.8861921E 02     | 3.5479742E 01  |
| 15 Q15 | 3.0122184E 02     | -1.4559719E 02     | 1.5562465E 02  |
| 16 Q16 | 5.9083848E 02     | -2.3977704E 01     | 5.6686078E 02  |
| 17 Q17 | 6.3031434E 02     | 5.2613994E 01      | 6.8292834E 02  |
| 18 Q18 | -5.6825214E-06    | 7.9705105E 00      | 7.9705048E 00  |
| 19 Q25 | -2.3530247E 01    | 1.5231504E 02      | 1.2878479E 02  |
| 20 Q30 | -1.8672948E 02    | 1.9103079E 02      | 4.3013115E 00  |
| 21 Q31 | 3.1591018E 01     | -1.7751692E 02     | -1.4592590E 02 |
| 22 Q32 | 9.8796258E-01     | -1.9806925E 02     | -1.9708129E 02 |
| 23 Q33 | 1.5555802E 01     | -1.3949986E 01     | 1.6058162E 00  |
| 24 Q34 | -3.6230573E 01    | -1.6709819E 01     | -5.2940391E 01 |
| 25 Q35 | 3.9827180E 01     | -1.1292153E 02     | -7.3094348E 01 |
| 26 Q36 | -3.8908220E 01    | -8.2993039E 01     | -1.2190126E 02 |
| 27 Q37 | -5.0719497E 01    | 1.1337843E 02      | 6.2658936E 01  |
| 28 Q38 | -4.1281723E 01    | 9.1916910E 01      | 5.0635188E 01  |
| 29 P40 | -1.2864687E 03    | 3.7010760E 03      | 2.4146073E 03  |
| 30 P41 | -2.1253780E 03    | 2.3878279E 03      | 2.6244998E 02  |
| 31 P42 | -4.9715538E 03    | 1.9327291E 03      | -3.0388247E 03 |
| 32 P43 | -9.9065851E 03    | 8.6290494E 02      | -9.0436802E 03 |
| 33 P44 | -9.9016322E 03    | 8.6247333E 02      | -9.0391588E 03 |
| 34 P45 | -1.6992720E 04    | 5.4107578E 03      | -1.1581962E 04 |
| 35 P46 | -2.4204782E 04    | 9.7359459E 03      | -1.4468836E 04 |
| 36 P47 | -3.3154810E 04    | 1.4072725E 04      | -1.9082086E 04 |
| 37 P48 | -4.1832097E 04    | 1.9254835E 04      | -2.2577262E 04 |
| 38 P49 | -4.1832097E 04    | -2.0961867E-05     | -4.1832097E 04 |
| 39 P50 | 6.3555620E 02     | -2.8336464E 03     | -2.1980902E 03 |
| 40 P51 | -8.8867177E 02    | 1.0548714E 03      | 1.6619962E 02  |
| 41 P52 | -3.4960737E 03    | 3.3075199E 03      | -1.8855386E 02 |
| 42 P53 | -8.5857549E 03    | 9.4511458E 03      | 8.6539184E 02  |
| 43 P54 | -7.2300137E 03    | 7.9587550E 03      | 7.2874139E 02  |
| 44 P55 | -1.2872030E 04    | 7.3620555E 03      | -5.5099747E 03 |
| 45 P56 | -2.0107421E 04    | 5.8766488E 03      | -1.4230772E 04 |
| 46 P57 | -1.9164383E 04    | 5.6010337E 03      | -1.3563349E 04 |
| 47 P58 | -2.6640401E 04    | 2.5105518E 03      | -2.4129849E 04 |
| 48 P59 | -3.4846721E 04    | -1.9968771E 03     | -3.6843598E 04 |
| 49 P60 | -3.4846721E 04    | -2.9057250E-05     | -3.4846721E 04 |
| 50 P62 | 4.7261699E 02     | -1.9129227E 02     | 2.0132472E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S200<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 4.7252228E 02     | -1.9125397E 02     | 2.8126831E 02  |
| 52 P64 | 1.0105084E 02     | 8.3960884E 01      | 1.8501173E 02  |
| 53 P67 | 5.7599733E 02     | 5.0864359E 01      | 6.2686169E 02  |
| 54 P68 | 5.7588196E 02     | 5.0854187E 01      | 6.2673614E 02  |
| 55 P69 | 2.0098740E 02     | 1.2005733E 01      | 2.1299313E 02  |
| 56 P72 | -1.3972929E 02    | 7.0633906E 02      | 5.6660977E 02  |
| 57 P73 | -1.3970133E 02    | 7.0619760E 02      | 5.6649628E 02  |
| 58 P74 | 3.4495977E 02     | -1.2197190E 02     | 2.2298787E 02  |
| 59 P77 | 3.6635936E 03     | -4.0337949E 01     | 3.6232556E 03  |
| 60 P79 | 2.5618051E 03     | -4.4762934E 02     | 2.1141757E 03  |
| 61 P80 | 2.5612917E 03     | -4.4753962E 02     | 2.1137521E 03  |
| 62 P81 | -4.1645026E 01    | 9.4896653E 01      | 5.3251626E 01  |
| 63 P82 | 3.8480406E 02     | -3.3272498E 02     | 5.2079086E 01  |
| 64 P83 | -4.8988032E 02    | -2.0669116E 02     | -6.9657148E 02 |
| 65 P84 | -1.2746322E 03    | 6.4912245E 01      | -1.2097199E 03 |
| 66 P93 | -3.2312577E 02    | 1.2011321E 02      | -2.0301257E 02 |
| 67 P94 | -8.5036831E 02    | 7.4317044E 02      | -1.0719787E 02 |
| 68 P95 | -1.1425353E 03    | 1.0244380E 03      | -1.1809729E 02 |
| 69 P96 | 4.6435202E 03     | -1.0715749E 04     | -6.0722288E 03 |
| 70 P97 | 6.1140496E 03     | 4.3304182E 02      | 6.5470914E 03  |
| 71 Q19 | 5.5017220E 01     | -7.7207076E 01     | -2.2189856E 01 |
| 72 Q20 | 3.7414768E 01     | -7.0663846E 01     | -3.3249078E 01 |
| 73 Q21 | 2.2196241E 01     | 8.5618480E 01      | 1.0781472E 02  |
| 74 Q22 | -6.5255859E 00    | 1.1955986E 02      | 1.1303428E 02  |
| 75 Q23 | 2.0350241E 01     | 6.1238971E 01      | 8.1589212E 01  |
| 76 Q24 | 4.4351864E 00     | 7.6560308E 01      | 8.0995494E 01  |
| 77 Q26 | 3.8709988E 01     | 9.6508223E 01      | 1.3521821E 02  |
| 78 Q28 | 4.9053409E 01     | 2.1750780E 02      | 2.6656121E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -3.7537236E 01    | -7.9665509E 01     | -1.1720275E 02 |
| 2 Q2   | -5.5401971E 01    | -5.7994899E 01     | -1.1339687E 02 |
| 3 Q3   | -1.6137852E 02    | -7.2683263E 01     | -2.3406179E 02 |
| 4 Q4   | -2.4881392E 02    | -7.7886168E 01     | -3.2670009E 02 |
| 5 Q5   | -3.6019143E 02    | -1.3346976E 02     | -4.9366119E 02 |
| 6 Q6   | -3.6631763E 02    | -1.5442888E 02     | -5.2074651E 02 |
| 7 Q7   | -4.8378537E 02    | -1.7311979E 00     | -4.8551657E 02 |
| 8 Q8   | -4.6904244E 02    | -1.1544831E 01     | -4.8058727E 02 |
| 9 Q9   | 9.3548297E-06     | 4.1504359E 02      | 4.1504360E 02  |
| 10 Q10 | 2.5286172E 01     | -1.1906391E 01     | 1.3379781E 01  |
| 11 Q11 | 9.3498979E 01     | 5.5209443E 01      | 1.4870842E 02  |
| 12 Q12 | 1.4231170E 02     | 5.4700370E 01      | 1.9701207E 02  |
| 13 Q13 | 2.1456284E 02     | 9.6020169E 01      | 3.1058301E 02  |
| 14 Q14 | 2.2409895E 02     | 1.1455131E 02      | 3.3865026E 02  |
| 15 Q15 | 3.0122184E 02     | 1.2920626E 02      | 4.3042810E 02  |
| 16 Q16 | 5.9083848E 02     | 9.8153043E 00      | 6.0065379E 02  |
| 17 Q17 | 6.3031434E 02     | -6.7627921E 00     | 6.2355156E 02  |
| 18 Q18 | -5.6825214E-06    | -7.6764398E 00     | -7.6764455E 00 |
| 19 Q25 | -2.3530247E 01    | -4.6833497E 01     | -7.0363744E 01 |
| 20 Q30 | -1.8672948E 02    | -9.1351180E 01     | -2.7808065E 02 |
| 21 Q31 | 3.1591018E 01     | 5.3823454E 01      | 8.5414472E 01  |
| 22 Q32 | 9.3796258E-01     | 5.1147013E 01      | 5.2134976E 01  |
| 23 Q33 | 1.5555802E 01     | 3.4129132E-01      | 1.5897094E 01  |
| 24 Q34 | -3.6230573E 01    | -1.0086593E 01     | -4.6317165E 01 |
| 25 Q35 | 3.9827180E 01     | 3.3400918E 01      | 7.3228098E 01  |
| 26 Q36 | -3.8908220E 01    | 9.4231141E 00      | -2.9485106E 01 |
| 27 Q37 | -5.0719497E 01    | -4.9798575E 01     | -1.0051807E 02 |
| 28 Q38 | -4.1281723E 01    | -2.4465424E 01     | -6.5747147E 01 |
| 29 P40 | -1.2864687E 03    | -1.5349053E 03     | -2.8213740E 03 |
| 30 P41 | -2.1253780E 03    | -1.8364288E 03     | -3.9618067E 03 |
| 31 P42 | -4.9715538E 03    | -2.7966869E 03     | -7.7682407E 03 |
| 32 P43 | -9.9065851E 03    | -4.0494495E 03     | -1.3956035E 04 |
| 33 P44 | -9.9016322E 03    | -4.0474249E 03     | -1.3949057E 04 |
| 34 P45 | -1.6992720E 04    | -6.6750438E 03     | -2.3667764E 04 |
| 35 P46 | -2.4204782E 04    | -9.7154397E 03     | -3.3920222E 04 |
| 36 P47 | -3.3154810E 04    | -9.7474668E 03     | -4.2902277E 04 |
| 37 P48 | -4.1832097E 04    | -9.9610465E 03     | -5.1793143E 04 |
| 38 P49 | -4.1832097E 04    | 3.2065446E-05      | -4.1832097E 04 |
| 39 P50 | 6.3555620E 02     | 7.6624249E 02      | 1.4017987E 03  |
| 40 P51 | -8.8867177E 02    | -8.4475118E 02     | -1.7334229E 03 |
| 41 P52 | -3.4960737E 03    | -2.2121041E 03     | -5.7081778E 03 |
| 42 P53 | -8.5857539E 03    | -5.2658656E 03     | -1.3851620E 04 |
| 43 P54 | -7.2300137E 03    | -4.4343550E 03     | -1.1664369E 04 |
| 44 P55 | -1.2872030E 04    | -5.8158851E 03     | -1.8687915E 04 |
| 45 P56 | -2.0107421E 04    | -7.5002064E 03     | -2.7607627E 04 |
| 46 P57 | -1.9164383E 04    | -7.1484468E 03     | -2.6312829E 04 |
| 47 P58 | -2.6640401E 04    | -5.6400332E 03     | -3.2280434E 04 |
| 48 P59 | -3.4846721E 04    | -3.8249249E 03     | -3.8671645E 04 |
| 49 P60 | -3.4846721E 04    | 6.3652648E-06      | -3.4846721E 04 |
| 50 P62 | 4.7261699E 02     | 1.8423457E 02      | 6.5685155E 02  |



## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 4.7252228E 02     | 1.8419764E 02      | 6.5671992E 02  |
| 52 P64 | 1.0105084E 02     | 4.7016125E 00      | 1.0575245E 02  |
| 53 P67 | 5.7599733E 02     | 6.9831501E 01      | 6.4582883E 02  |
| 54 P68 | 5.7588196E 02     | 6.9817497E 01      | 6.4569945E 02  |
| 55 P69 | 2.0098740E 02     | 4.0716000E 01      | 2.4170340E 02  |
| 56 P72 | -1.3972929E 02    | -4.7186183E 02     | -6.1159112E 02 |
| 57 P73 | -1.3970133E 02    | -4.7176729E 02     | -6.1146863E 02 |
| 58 P74 | 3.4495977E 02     | 1.0306176E 02      | 4.4802153E 02  |
| 59 P77 | 3.6635936E 03     | 1.1160001E 03      | 4.7795936E 03  |
| 60 P79 | 2.5618051E 03     | 7.1728020E 02      | 3.2790852E 03  |
| 61 P80 | 2.5612917E 03     | 7.1713648E 02      | 3.2784282E 03  |
| 62 P81 | -4.1645026E 01    | -1.2041926E 02     | -1.6206428E 02 |
| 63 P82 | 3.8480406E 02     | 1.4019364E 02      | 5.2499770E 02  |
| 64 P83 | -4.8988032E 02    | 1.1802201E 03      | 6.9033979E 02  |
| 65 P84 | -1.2746322E 03    | 1.2547048E 03      | -1.9927383E 01 |
| 66 P93 | -3.2312577E 02    | -2.6024972E 02     | -5.8337550E 02 |
| 67 P94 | -8.5036831E 02    | -6.3244309E 02     | -1.4828114E 03 |
| 68 P95 | -1.1425353E 03    | -7.6980507E 02     | -1.9123403E 03 |
| 69 P96 | 4.6435202E 03     | 4.2232257E 03      | 8.8667459E 03  |
| 70 P97 | 6.1140496E 03     | 8.8624148E 00      | 6.1229119E 03  |
| 71 Q19 | 5.5017220E 01     | 2.3908109E 01      | 7.8955330E 01  |
| 72 Q20 | 3.7414768E 01     | 9.7608637E 00      | 4.7175632E 01  |
| 73 Q21 | 1.196241E 01      | -2.0152159E 01     | 2.0440826E 00  |
| 74 Q22 | 1.5859E 00        | -4.0427594E 01     | -4.6953180E 01 |
| 75 Q23 | 1.0350241E 01     | -9.2576944E 00     | 1.1092547E 01  |
| 76 Q24 | 4.4351864E 00     | -1.6740142E 01     | -1.2304955E 01 |
| 77 Q26 | 3.8709988E 01     | -4.8979445E 00     | 3.3812044E 01  |
| 78 Q28 | 4.9053409E 01     | -4.7665953E 01     | 1.3874559E 00  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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|    | PT  | S2.5<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|----|-----|-------------------|--------------------|----------------|
| 1  | Q1  | -3.7537236E 01    | 9.8265976E 01      | 6.0728739E 01  |
| 2  | Q2  | -5.5401971E 01    | 7.4126036E 01      | 1.8724065E 01  |
| 3  | Q3  | -1.6137852E 02    | 9.0365014E 01      | -7.1013508E 01 |
| 4  | Q4  | -2.4881392E 02    | 9.9666578E 01      | -1.4914735E 02 |
| 5  | Q5  | -3.6019143E 02    | 1.7706911E 02      | -1.8312232E 02 |
| 6  | Q6  | -3.6631763E 02    | 1.5401694E 02      | -2.1230070E 02 |
| 7  | Q7  | -4.8378537E 02    | 6.5115934E 00      | -4.7727378E 02 |
| 8  | Q8  | -4.6904244E 02    | 2.0547189E 01      | -4.4849526E 02 |
| 9  | Q9  | 9.3548297E-06     | -4.9948434E 02     | -4.9948432E 02 |
| 10 | Q10 | 2.5286172E 01     | 1.5949564E 01      | 4.1235736E 01  |
| 11 | Q11 | 9.3498979E 01     | -6.4425308E 01     | 2.9073671E 01  |
| 12 | Q12 | 1.4231170E 02     | -6.3323817E 01     | 7.8987886E 01  |
| 13 | Q13 | 2.1456284E 02     | -1.1284214E 02     | 1.0172071E 02  |
| 14 | Q14 | 2.2409895E 02     | -1.2886747E 02     | 9.5231489E 01  |
| 15 | Q15 | 3.0122184E 02     | -1.4371336E 02     | 1.5750848E 02  |
| 16 | Q16 | 5.9083848E 02     | -3.5712564E 01     | 5.5512592E 02  |
| 17 | Q17 | 6.3031434E 02     | -1.3754571E 01     | 6.1655977E 02  |
| 18 | Q18 | -5.6825214E-06    | 9.1661309E 00      | 9.1661253E 00  |
| 19 | Q25 | -2.3530247E 01    | 5.8781638E 01      | 3.5251391E 01  |
| 20 | Q30 | -1.8672948E 02    | 1.0968952E 02      | -7.7039959E 01 |
| 21 | Q31 | 3.1591018E 01     | -6.6824607E 01     | -2.003589E 01  |
| 22 | Q32 | 9.8796258E-01     | -6.4089835E 01     | -6.101873E 01  |
| 23 | Q33 | 1.5555802E 01     | -1.8396554E 00     | 1.3716147E 01  |
| 24 | Q34 | -3.6230573E 01    | 1.0747275E 01      | -2.5483298E 01 |
| 25 | Q35 | 3.9827180E 01     | -4.1461310E 01     | -1.6341310E 00 |
| 26 | Q36 | -3.8908220E 01    | -1.1568982E 01     | -5.0477202E 01 |
| 27 | Q37 | -5.0719497E 01    | 6.1828212E 01      | 1.1108714E 01  |
| 28 | Q38 | -4.1281723E 01    | 3.2571768E 01      | -8.7099552E 00 |
| 29 | P40 | -1.2864687E 03    | 1.8445067E 03      | 5.5803799E 02  |
| 30 | P41 | -2.1253780E 03    | 2.2342573E 03      | 1.0887933E 02  |
| 31 | P42 | -4.9715538E 03    | 3.3977543E 03      | -1.5737995E 03 |
| 32 | P43 | -9.9065851E 03    | 4.9712773E 03      | -4.9353079E 03 |
| 33 | P44 | -9.9016322E 03    | 4.9687917E 03      | -4.9328405E 03 |
| 34 | P45 | -1.6992720E 04    | 8.4547509E 03      | -8.5379692E 03 |
| 35 | P46 | -2.4204782E 04    | 1.1487037E 04      | -1.2717745E 04 |
| 36 | P47 | -3.3154810E 04    | 1.1607502E 04      | -2.1547309E 04 |
| 37 | P48 | -4.1832097E 04    | 1.1987624E 04      | -2.9844472E 04 |
| 38 | P49 | -4.1832097E 04    | -3.2555639E-05     | -4.1832097E 04 |
| 39 | P50 | 6.3555620E 02     | -9.0966311E 02     | -2.7410692E 02 |
| 40 | P51 | -8.8867177E 02    | 1.0398031E 03      | 1.5113129E 02  |
| 41 | P52 | -3.4960737E 03    | 2.6895865E 03      | -8.0648720E 02 |
| 42 | P53 | -8.5857539E 03    | 6.3583623E 03      | -2.2273917E 03 |
| 43 | P54 | -7.2300137E 03    | 5.3543399E 03      | -1.8756738E 03 |
| 44 | P55 | -1.2872030E 04    | 6.8905140E 03      | -5.9815161E 03 |
| 45 | P56 | -2.0107421E 04    | 8.7334307E 03      | -1.1373990E 04 |
| 46 | P57 | -1.9164383E 04    | 8.3238330E 03      | -1.0840549E 04 |
| 47 | P58 | -2.6640401E 04    | 6.9552598E 03      | -1.9685141E 04 |
| 48 | P59 | -3.4846721E 04    | 5.1804630E 03      | -2.9666258E 04 |
| 49 | P60 | -3.4846721E 04    | -7.4040030E-06     | -3.4846721E 04 |
| 50 | P62 | 4.7261699E 02     | -2.1998715E 02     | 2.5262984E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 4.7252228E 02     | -2.1994306E 02     | 2.5257922E 02  |
| 52 P64 | 1.0105084E 02     | -3.8459961E 00     | 9.7204846E 01  |
| 53 P67 | 5.7599733E 02     | -7.9616043E 01     | 4.9638128E 02  |
| 54 P68 | 5.7588196E 02     | -7.9600077E 01     | 4.9628188E 02  |
| 55 P69 | 2.0098740E 02     | -4.9021001E 01     | 1.5196640E 02  |
| 56 P72 | -1.3972929E 02    | 5.5512822E 02      | 4.1539893E 02  |
| 57 P73 | -1.3970133E 02    | 5.5501700E 02      | 4.131568E 02   |
| 58 P74 | 3.4495977E 02     | -1.2350037E 02     | 2.1645941E 02  |
| 59 P77 | 3.6635936E 03     | -1.3894314E 03     | 2.2741622E 03  |
| 60 P79 | 2.5618051E 03     | -9.1266559E 02     | 1.6491395E 03  |
| 61 P80 | 2.5612917E 03     | -9.1248270E 02     | 1.6488090E 03  |
| 62 P81 | -4.1645026E 01    | 1.3863659E 02      | 9.6991564E 01  |
| 63 P82 | 3.8490406E 02     | -2.0138631E 02     | 1.8341775E 02  |
| 64 P83 | -4.8988032E 02    | -1.1343993E 03     | -1.6242796E 03 |
| 65 P84 | -1.2746322E 03    | -1.2057861E 03     | -2.4834182E 03 |
| 66 P93 | -3.2312577E 02    | 3.1951507E 02      | -3.6107025E 00 |
| 67 P94 | -8.5036831E 02    | 7.7198526E 02      | -7.8383057E 01 |
| 68 P95 | -1.1425353E 03    | 9.3237008E 02      | -2.1016520E 02 |
| 69 P96 | 4.6435202E 03     | -5.1483127E 03     | -5.0479254E 02 |
| 70 P97 | 6.1140496E 03     | -2.2233076E 02     | 5.8917188E 03  |
| 71 Q19 | 5.5017220E 01     | -2.6604094E 01     | 2.8413126E 01  |
| 72 Q20 | 3.7414768E 01     | -9.1983365E 00     | 2.8216432E 01  |
| 73 Q21 | 2.2196241E 01     | 2.6769897E 01      | 4.8966138E 01  |
| 74 Q22 | -6.5255859E 00    | 5.1418458E 01      | 4.4892872E 01  |
| 75 Q23 | 2.0350241E 01     | 1.3844959E 01      | 3.4195200E 01  |
| 76 Q24 | 4.4351864E 00     | 2.2581515E 01      | 2.7016701E 01  |
| 77 Q26 | 3.8709988E 01     | 7.9902694E 00      | 4.6700257E 01  |
| 78 Q28 | 4.7053409E 01     | 5.4495207E 01      | 1.0354862E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|-------------------|----------------|
| 1 Q1   | -3.7537236E 01    | -2.5441581E 01    | -6.2978817E 01 |
| 2 Q2   | -5.5401971E 01    | -4.5616471E 01    | -1.0101844E 02 |
| 3 Q3   | -1.6137852E 02    | -5.6575853E 01    | -2.1795437E 02 |
| 4 Q4   | -2.4881392E 02    | -7.0773886E 01    | -3.1958781E 02 |
| 5 Q5   | -3.6019143E 02    | -5.7859182E 01    | -4.1805061E 02 |
| 6 Q6   | -3.6631763E 02    | -4.2855625E 01    | -4.0917326E 02 |
| 7 Q7   | -4.8378537E 02    | 8.7982782E 01     | -3.9580259E 02 |
| 8 Q8   | -4.6904244E 02    | 9.4307739E 01     | -3.7473471E 02 |
| 9 Q9   | 9.3548297E-06     | 1.0309002E 02     | 1.0309003E 02  |
| 10 Q10 | 2.5286172E 01     | 8.5498621E 00     | 3.3836034E 01  |
| 11 Q11 | 9.3498979E 01     | 1.6179562E 01     | 1.0967854E 02  |
| 12 Q12 | 1.4231170E 02     | 3.6031333E 01     | 1.7834303E 02  |
| 13 Q13 | 2.1456284E 02     | 4.1714892E 01     | 2.5627773E 02  |
| 14 Q14 | 2.2409895E 02     | 3.3949550E 01     | 2.5804850E 02  |
| 15 Q15 | 3.0122184E 02     | 6.3664874E 01     | 3.6488671E 02  |
| 16 Q16 | 5.9083848E 02     | 2.0596797E 01     | 6.1143528E 02  |
| 17 Q17 | 6.3031434E 02     | 3.2522914E 01     | 6.6283725E 02  |
| 18 Q18 | -5.6825214E-06    | -4.5847157E 00    | -4.5847213E 00 |
| 19 Q25 | -2.3530247E 01    | 1.0923471E 01     | -1.2606776E 01 |
| 20 Q30 | -1.8672948E 02    | -1.6744550E 01    | -2.0347402E 02 |
| 21 Q31 | 3.1591018E 01     | -1.4157938E 01    | 1.7433079E 01  |
| 22 Q32 | 9.8796258E-01     | -2.4662849E 01    | -2.3674886E 01 |
| 23 Q33 | 1.5555802E 01     | -4.0016121E 00    | 1.1554190E 01  |
| 24 Q34 | -3.6230573E 01    | -1.5758514E 01    | -5.1989087E 01 |
| 25 Q35 | 3.9827180E 01     | -9.8931588E 00    | 2.9934021E 01  |
| 26 Q36 | -3.8908220E 01    | -2.3276033E 01    | -6.2184253E 01 |
| 27 Q37 | -5.0719497E 01    | -7.1728755E 00    | -5.7892373E 01 |
| 28 Q38 | -4.1281723E 01    | 9.0512993E 00     | -3.2230424E 01 |
| 29 P40 | -1.2864687E 03    | -8.6938715E 01    | -1.3734074E 03 |
| 30 P41 | -2.1253780E 03    | -9.4034400E 02    | -3.0657219E 03 |
| 31 P42 | -4.9715538E 03    | -2.1069266E 03    | -7.0784804E 03 |
| 32 P43 | -9.9065851E 03    | -3.8656527E 03    | -1.3772238E 04 |
| 33 P44 | -9.9016322E 03    | -3.8637200E 03    | -1.3765352E 04 |
| 34 P45 | -1.6992720E 04    | -5.0027936E 03    | -2.1995513E 04 |
| 35 P46 | -2.4204782E 04    | -5.8465353E 03    | -3.0051317E 04 |
| 36 P47 | -3.3154810E 04    | -4.2188538E 03    | -3.7373664E 04 |
| 37 P48 | -4.1832097E 04    | -2.4741608E 03    | -4.4306257E 04 |
| 38 P49 | -4.1832097E 04    | 1.9226402E-05     | -4.1832097E 04 |
| 39 P50 | 6.3555620E 02     | -3.5901390E 02    | 2.7654229E 02  |
| 40 P51 | -8.8867177E 02    | -4.6011946E 02    | -1.3487912E 03 |
| 41 P52 | -3.4960737E 03    | -9.5935748E 02    | -4.4554312E 03 |
| 42 P53 | -8.5857539E 03    | -1.6175810E 03    | -1.0203335E 04 |
| 43 P54 | -7.2300137E 03    | -1.3621556E 03    | -8.5921693E 03 |
| 44 P55 | -1.2872030E 04    | -2.9005380E 03    | -1.5772568E 04 |
| 45 P56 | -2.0107421E 04    | -5.0528108E 03    | -2.5160232E 04 |
| 46 P57 | -1.9164383E 04    | -4.8158342E 03    | -2.3980217E 04 |
| 47 P58 | -2.6640401E 04    | -4.8871008E 03    | -3.1527502E 04 |
| 48 P59 | -3.4846721E 04    | -5.1790004E 03    | -4.0025721E 04 |
| 49 P60 | -3.4846721E 04    | -5.3066286E-06    | -3.4846721E 04 |
| 50 P62 | 4.7261699E 02     | 1.1003317E 02     | 5.8265016E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|-------------------|----------------|
| 51 P63 | 4.7252228E 02     | 1.1001111E 02     | 5.8253338E 02  |
| 52 P64 | 1.0105084E 02     | 3.6712172E 01     | 1.3776301E 02  |
| 53 P67 | 5.7599733E 02     | 8.7674375E 01     | 6.6367170E 02  |
| 54 P68 | 5.7588196E 02     | 8.7656806E 01     | 6.6353875E 02  |
| 55 P69 | 2.0098740E 02     | 4.6289421E 01     | 2.4727682E 02  |
| 56 P72 | -1.3972929E 02    | -1.8861680E 02    | -3.2834609E 02 |
| 57 P73 | -1.3970133E 02    | -1.8857900E 02    | -3.2828033E 02 |
| 58 P74 | 3.4495977E 02     | 6.0193356E 01     | 4.0515313E 02  |
| 59 P77 | 3.6635936E 03     | 1.1603541E 03     | 4.8239476E 03  |
| 60 P79 | 2.5618051E 03     | 5.9432774E 02     | 3.1561328E 03  |
| 61 P80 | 2.5612917E 03     | 5.9420862E 02     | 3.1555003E 03  |
| 62 P81 | -4.1645026E 01    | -7.9592395E 01    | -1.2123742E 02 |
| 63 P82 | 3.8480406E 02     | 3.7902612E 01     | 4.2270668E 02  |
| 64 P83 | -4.8988032E 02    | 8.7875068E 02     | 3.8887036E 02  |
| 65 P84 | -1.2746322E 03    | 1.0499696E 03     | -2.2466261E 02 |
| 66 P93 | -3.2312577E 02    | -2.2270021E 02    | -5.4582598E 02 |
| 67 P94 | -8.5036831E 02    | -3.5753898E 02    | -1.2079073E 03 |
| 68 P95 | -1.1425353E 03    | -3.8125777E 02    | -1.5237930E 03 |
| 69 P96 | 4.6435202E 03     | 8.6944716E 01     | 4.7304649E 03  |
| 70 P97 | 6.1140496E 03     | 3.5994406E 02     | 6.4739935E 03  |
| 71 Q19 | 5.5017220E 01     | -8.2446572E 00    | 4.6772563E 01  |
| 72 Q20 | 3.7414768E 01     | -2.0376373E 01    | 1.7038395E 01  |
| 73 Q21 | 2.2196241E 01     | 1.1449884E 01     | 3.3646126E 01  |
| 74 Q22 | -6.5255859E 00    | 4.1044679E 00     | -2.4211180E 00 |
| 75 Q23 | 2.0350241E 01     | 1.2679431E 01     | 3.3029672E 01  |
| 76 Q24 | 4.4351864E 00     | 1.1387411E 01     | 1.5822598E 01  |
| 77 Q26 | 3.8709988E 01     | 3.1692695E 01     | 7.0402683E 01  |
| 78 Q28 | 4.9053409E 01     | 4.0529625E 01     | 8.9583033E 01  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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|    | PT  | S2.0<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|----|-----|-------------------|--------------------|----------------|
| 1  | Q1  | -2.6721455E 01    | -1.0540874E 02     | -1.3213020E 02 |
| 2  | Q2  | -3.5906010E 01    | -2.0359539E 01     | -5.6265549E 01 |
| 3  | Q3  | -1.3759665E 02    | -2.0313323E 01     | -1.5790997E 02 |
| 4  | Q4  | -2.1453241E 02    | -1.6397441E 00     | -2.1617216E 02 |
| 5  | Q5  | -3.1763782E 02    | -1.4877550E 02     | -4.6641332E 02 |
| 6  | Q6  | -3.2780712E 02    | -1.4187433E 02     | -4.6968145E 02 |
| 7  | Q7  | -4.5237281E 02    | -1.4558878E 02     | -5.9796159E 02 |
| 8  | Q8  | -4.3699690E 02    | -1.8232240E 02     | -6.1931930E 02 |
| 9  | Q9  | 8.5283191E-06     | 4.6365979E 02      | 4.6365981E 02  |
| 10 | Q10 | 2.1179556E 01     | -4.6848817E 01     | -2.5669262E 01 |
| 11 | Q11 | 8.5518612E 01     | 6.5301719E 01      | 1.5082033E 02  |
| 12 | Q12 | 1.2629734E 02     | 1.8500766E 01      | 1.4479811E 02  |
| 13 | Q13 | 1.9536421E 02     | 8.4755386E 01      | 2.8011959E 02  |
| 14 | Q14 | 2.1135943E 02     | 1.2863191E 02      | 3.3999134E 02  |
| 15 | Q15 | 2.7185665E 02     | 8.5204673E 01      | 3.5706132E 02  |
| 16 | Q16 | 5.1003075E 02     | -6.1053920E 01     | 4.4897684E 02  |
| 17 | Q17 | 5.3723407E 02     | -1.2622818E 02     | 4.1100590E 02  |
| 18 | Q18 | -4.8241108E-06    | -4.0693379E 00     | -4.0693427E 00 |
| 19 | Q25 | -2.6699981E 01    | -1.2111080E 02     | -1.4781078E 02 |
| 20 | Q30 | -1.7391422E 02    | -1.3253740E 02     | -3.0645162E 02 |
| 21 | Q31 | 3.5888770E 01     | 1.4000876E 02      | 1.7589753E 02  |
| 22 | Q32 | 9.7712528E 00     | 1.6024214E 02      | 1.7001339E 02  |
| 23 | Q33 | 1.5800180E 01     | 1.1897854E 01      | 2.7698034E 01  |
| 24 | Q34 | -3.0526289E 01    | 1.8976488E 01      | -1.1549801E 01 |
| 25 | Q35 | 4.2310161E 01     | 8.8936539E 01      | 1.3124670E 02  |
| 26 | Q36 | -2.8678330E 01    | 7.2464811E 01      | 4.3786482E 01  |
| 27 | Q37 | -4.6477203E 01    | -8.5120282E 01     | -1.3159748E 02 |
| 28 | Q38 | -4.0915276E 01    | -7.1522223E 01     | -1.1243750E 02 |
| 29 | P40 | -1.2240327E 03    | -2.7860372E 03     | -4.0100700E 03 |
| 30 | P41 | -1.7110282E 03    | -1.5174963E 03     | -3.2285244E 03 |
| 31 | P42 | -4.0843139E 03    | -7.7608559E 02     | -4.8603994E 03 |
| 32 | P43 | -8.2216938E 03    | 6.6101754E 02      | -7.5606763E 03 |
| 33 | P44 | -8.2175832E 03    | 6.6068715E 02      | -7.5568961E 03 |
| 34 | P45 | -1.4470919E 04    | -2.2682559E 03     | -1.6739174E 04 |
| 35 | P46 | -2.0924785E 04    | -5.0614777E 03     | -2.5986263E 04 |
| 36 | P47 | -2.9293683E 04    | -7.7548704E 03     | -3.7048553E 04 |
| 37 | P48 | -3.7378126E 04    | -1.1127834E 04     | -4.8505960E 04 |
| 38 | P49 | -3.7378126E 04    | 1.9921554E-05      | -3.7378126E 04 |
| 39 | P50 | 7.6239251E 02     | 2.2466645E 03      | 3.0090570E 03  |
| 40 | P51 | -6.8755784E 02    | -6.6779217E 02     | -1.3553500E 03 |
| 41 | P52 | -3.0368104E 03    | -2.1821747E 03     | -5.2189851E 03 |
| 42 | P53 | -7.7838430E 03    | -6.5829456E 03     | -1.4366789E 04 |
| 43 | P54 | -6.5547294E 03    | -5.5434601E 03     | -1.2098189E 04 |
| 44 | P55 | -1.1472086E 04    | -4.4015982E 03     | -1.5873685E 04 |
| 45 | P56 | -1.7639354E 04    | -2.3626297E 03     | -2.0001984E 04 |
| 46 | P57 | -1.6812070E 04    | -2.2518222E 03     | -1.9063892E 04 |
| 47 | P58 | -2.3030225E 04    | 1.3296173E 03      | -2.1700608E 04 |
| 48 | P59 | -2.9751643E 04    | 6.1167808E 03      | -2.3634862E 04 |
| 49 | P60 | -2.9751643E 04    | 2.6852725E-05      | -2.9751643E 04 |
| 50 | P62 | 4.2259390E 02     | 9.7664125E 01      | 5.2025802E 02  |

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| PT     | S2.0<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 4.2250920E 02     | 9.7644585E 01      | 5.2015378E 02  |
| 52 P64 | 8.5516481E 01     | -7.9842802E 01     | 5.6736803E 00  |
| 53 P67 | 5.4160569E 02     | -7.8798787E 01     | 4.6280690E 02  |
| 54 P68 | 5.4149719E 02     | -7.8783011E 01     | 4.6271418E 02  |
| 55 P69 | 1.7963196E 02     | -2.8701252E 01     | 1.5093071E 02  |
| 56 P72 | -9.0269969E 01    | -5.0369832E 02     | -5.9396828E 02 |
| 57 P73 | -9.0251930E 01    | -5.0359746E 02     | -5.9384939E 02 |
| 58 P74 | 3.1041939E 02     | 6.4622294E 01      | 3.7504168E 02  |
| 59 P77 | 3.0599441E 03     | -4.4757466E 02     | 2.6123694E 03  |
| 60 P79 | 2.1982009E 03     | 5.2738956E 01      | 2.2509398E 03  |
| 61 P80 | 2.1977604E 03     | 5.2728381E 01      | 2.2504887E 03  |
| 62 P81 | -2.2883818E 01    | -5.8798329E 01     | -8.1682148E 01 |
| 63 P82 | 3.2861893E 02     | 2.1600464E 02      | 5.4462357E 02  |
| 64 P83 | -3.8862498E 02    | 3.0393402E 02      | -8.4690967E 01 |
| 65 P84 | -1.3027294E 03    | 3.2538471E 01      | -1.2701909E 03 |
| 66 P93 | -2.2489060E 02    | -2.4567849E 01     | -2.4945844E 02 |
| 67 P94 | -6.8791146E 02    | -4.5102922E 02     | -1.1389407E 03 |
| 68 P95 | -9.7693117E 02    | -6.5612582E 02     | -1.6330570E 03 |
| 69 P96 | 4.3262694E 03     | 6.3952236E 03      | 1.0721493E 04  |
| 70 P97 | 5.2111707E 03     | -1.1849407E 03     | 4.0262300E 03  |
| 71 Q19 | 5.6843956E 01     | 5.8249201E 01      | 1.1509316E 02  |
| 72 Q20 | 4.4592918E 01     | 5.6910854E 01      | 1.0150377E 02  |
| 73 Q21 | 1.7690547E 01     | -7.1035326E 01     | -5.3344779E 01 |
| 74 Q22 | -7.5327709E 00    | -9.4267039E 01     | -1.0179981E 02 |
| 75 Q23 | 1.6410844E 01     | -5.2334628E 01     | -3.5923784E 01 |
| 76 Q24 | 6.6723086E-01     | -6.3506744E 01     | -6.2839513E 01 |
| 77 Q26 | 2.6518879E 01     | -8.5367994E 01     | -5.8849116E 01 |
| 78 Q28 | 2.6709307E 01     | -1.8391396E 02     | -1.5720466E 02 |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S2.0<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -2.6721455E 01    | 1.4496757E 02      | 1.1824611E 02  |
| 2 Q2   | -3.5906010E 01    | 4.3047649E 01      | 7.1416392E 00  |
| 3 Q3   | -1.3759665E 02    | 5.0046958E 01      | -8.7549691E 01 |
| 4 Q4   | -2.1453241E 02    | 3.4178314E 01      | -1.8035410E 02 |
| 5 Q5   | -3.1763782E 02    | 2.3102986E 02      | -8.6607956E 01 |
| 6 Q6   | -3.2780712E 02    | 2.1958652E 02      | -1.0812061E 02 |
| 7 Q7   | -4.5237281E 02    | 2.3442045E 02      | -2.1795236E 02 |
| 8 Q8   | -4.3699690E 02    | 2.8011406E 02      | -1.5688284E 02 |
| 9 Q9   | 8.5283191E-06     | -8.0228479E 02     | -8.0228478E 02 |
| 10 Q10 | 2.1179556E 01     | 5.5349714E 01      | 7.6529269E 01  |
| 11 Q11 | 8.5518612E 01     | -9.6284728E 01     | -1.0766117E 01 |
| 12 Q12 | 1.2629734E 02     | -4.4128879E 01     | 8.2168462E 01  |
| 13 Q13 | 1.9536421E 02     | -1.3508118E 02     | 6.0283031E 01  |
| 14 Q14 | 2.1135943E 02     | -1.8861921E 02     | 2.2740219E 01  |
| 15 Q15 | 2.7185665E 02     | -1.45597 0E 02     | 1.2625947E 02  |
| 16 Q16 | 5.1003075E 02     | -2.3977704E 01     | 4.8605305E 02  |
| 17 Q17 | 5.3723407E 02     | 5.2613994E 01      | 5.8984807E 02  |
| 18 Q18 | -4.8241108E-06    | 7.9705105E 00      | 7.9705057E 00  |
| 19 Q25 | -2.6699981E 01    | 1.5231504E 02      | 1.2561506E 02  |
| 20 Q30 | -1.7391422E 02    | 1.9103079E 02      | 1.7116566E 01  |
| 21 Q31 | 3.5888770E 01     | -1.7751692E 02     | -1.4162815E 02 |
| 22 Q32 | 9.7712528E 00     | -1.9806925E 02     | -1.8829800E 02 |
| 23 Q33 | 1.5800180E 01     | -1.3949986E 01     | 1.8501943E 00  |
| 24 Q34 | -3.0526289E 01    | -1.6709819E 01     | -4.7236109E 01 |
| 25 Q35 | 4.2310161E 01     | -1.1292153E 02     | -7.0611367E 01 |
| 26 Q36 | -2.8678330E 01    | -8.2993039E 01     | -1.1167137E 02 |
| 27 Q37 | -4.6477203E 01    | 1.1337843E 02      | 6.6901230E 01  |
| 28 Q38 | -4.0915276E 01    | 9.1916910E 01      | 5.1001635E 01  |
| 29 P40 | -1.2240327E 03    | 3.7010760E 03      | 2.4770433E 03  |
| 30 P41 | -1.7110282E 03    | 2.3878279E 03      | 6.7679974E 02  |
| 31 P42 | -4.0843139E 03    | 1.9327291E 03      | -2.1515848E 03 |
| 32 P43 | -8.2216938E 03    | 8.6290494E 02      | -7.3587889E 03 |
| 33 P44 | -8.2175832E 03    | 8.6247333E 02      | -7.3551099E 03 |
| 34 P45 | -1.4470919E 04    | 5.4107578E 03      | -9.0601609E 03 |
| 35 P46 | -2.0924785E 04    | 9.7359459E 03      | -1.1188839E 04 |
| 36 P47 | -2.9293683E 04    | 1.4072725E 04      | -1.5220958E 04 |
| 37 P48 | -3.7378126E 04    | 1.9254835E 04      | -1.8123291E 04 |
| 38 P49 | -3.7378126E 04    | -2.0961867E-05     | -3.7378126E 04 |
| 39 P50 | 7.6239251E 02     | -2.8336464E 03     | -2.0712539E 03 |
| 40 P51 | -6.8755784E 02    | 1.0548714E 03      | 3.6741355E 02  |
| 41 P52 | -3.0368104E 03    | 3.3075199E 03      | 2.7070947E 02  |
| 42 P53 | -7.7838430E 03    | 9.4511458E 03      | 1.6673028E 03  |
| 43 P54 | -6.5547294E 03    | 7.9587550E 03      | 1.4040256E 03  |
| 44 P55 | -1.1472086E 04    | 7.3620555E 03      | -4.1100310E 03 |
| 45 P56 | -1.7639354E 04    | 5.8766488E 03      | -1.1762706E 04 |
| 46 P57 | -1.6812070E 04    | 5.6010337E 03      | -1.1211036E 04 |
| 47 P58 | -2.3040225E 04    | 2.5105518E 03      | -2.0519674E 04 |
| 48 P59 | -2.9751643E 04    | -1.9968771E 03     | -3.1748520E 04 |
| 49 P60 | -2.9751643E 04    | -2.9057250E-05     | -2.9751643E 04 |
| 50 P62 | 4.2259390E 02     | -1.9129227E 02     | 2.3130162E 02  |



## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S2.0<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 4.2250920E 02     | -1.9125397E 02     | 2.3125524E 02  |
| 52 P64 | 8.5516481E 01     | 8.3960884E 01      | 1.6947736E 02  |
| 53 P67 | 5.4160569E 02     | 5.0864359E 01      | 5.9247004E 02  |
| 54 P68 | 5.4149719E 02     | 5.0854187E 01      | 5.9235138E 02  |
| 55 P69 | 1.7963196E 02     | 1.2005733E 01      | 1.9163769E 02  |
| 56 P72 | -9.0269969E 01    | 7.0633906E 02      | 6.1606909E 02  |
| 57 P73 | -9.0251930E 01    | 7.0619760E 02      | 6.1594567E 02  |
| 58 P74 | 3.1041939E 02     | -1.2197190E 02     | 1.8844749E 02  |
| 59 P77 | 3.0599441E 03     | -4.0337949E 01     | 3.0196061E 03  |
| 60 P79 | 2.1982009E 03     | -4.4762934E 02     | 1.7505715E 03  |
| 61 P80 | 2.1977604E 03     | -4.4753962E 02     | 1.7502208E 03  |
| 62 P81 | -2.2883818E 01    | 9.4896653E 01      | 7.2012835E 01  |
| 63 P82 | 3.2861893E 02     | -3.3272498E 02     | -4.1060524E 00 |
| 64 P83 | -3.8862498E 02    | -2.0669116E 02     | -5.9531614E 02 |
| 65 P84 | -1.3027294E 03    | 6.4912245E 01      | -1.2378172E 03 |
| 66 P93 | -2.2489060E 02    | 1.2011321E 02      | -1.0477739E 02 |
| 67 P94 | -6.8791146E 02    | 7.4317044E 02      | 5.5258980E 01  |
| 68 P95 | -9.7693117E 02    | 1.0244380E 03      | 4.7506821E 01  |
| 69 P96 | 4.3262694E 03     | -1.0715749E 04     | -6.3894796E 03 |
| 70 P97 | 5.2111707E 03     | 4.3304182E 02      | 5.6442125E 03  |
| 71 Q19 | 5.6843956E 01     | -7.7207076E 01     | -2.0363120E 01 |
| 72 Q20 | 4.4592918E 01     | -7.0663846E 01     | -2.6070928E 01 |
| 73 Q21 | 1.7690547E 01     | 8.5618480E 01      | 1.0330403E 02  |
| 74 Q22 | -7.5327709E 00    | 1.1955986E 02      | 1.1202710E 02  |
| 75 Q23 | 1.6410844E 01     | 6.1238971E 01      | 7.7649814E 01  |
| 76 Q24 | 6.6723086E-01     | 7.6560308E 01      | 7.7227539E 01  |
| 77 Q26 | 2.6518879E 01     | 9.6508223E 01      | 1.2302710E 02  |
| 78 Q28 | 2.6709307E 01     | 2.1750780E 02      | 2.4421711E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S2.0<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -2.6721455E 01    | -7.9665509E 01     | -1.0638696E 02 |
| 2 Q2   | -3.5906010E 01    | -5.7994899E 01     | -9.3900909E 01 |
| 3 Q3   | -1.3759665E 02    | -7.2683263E 01     | -2.1027991E 02 |
| 4 Q4   | -2.1453241E 02    | -7.7886168E 01     | -2.9241858E 02 |
| 5 Q5   | -3.1763782E 02    | -1.3346976E 02     | -4.5110757E 02 |
| 6 Q6   | -3.2780712E 02    | -1.5442888E 02     | -4.8223600E 02 |
| 7 Q7   | -4.5237281E 02    | -1.7311979E 00     | -4.5410401E 02 |
| 8 Q8   | -4.3699690E 02    | -1.1544831E 01     | -4.4854174E 02 |
| 9 Q9   | 8.5283191E-06     | 4.1504359E 02      | 4.1504360E 02  |
| 10 Q10 | 2.1179556E 01     | -1.1906391E 01     | 9.2731645E 00  |
| 11 Q11 | 8.5518612E 01     | 5.5209443E 01      | 1.4072805E 02  |
| 12 Q12 | 1.2629734E 02     | 5.4700370E 01      | 1.8099771E 02  |
| 13 Q13 | 1.9536421E 02     | 9.6020169E 01      | 2.9138438E 02  |
| 14 Q14 | 2.1135943E 02     | 1.1455131E 02      | 3.2591074E 02  |
| 15 Q15 | 2.7185665E 02     | 1.2920626E 02      | 4.0106292E 02  |
| 16 Q16 | 5.1003075E 02     | 9.8153043E 00      | 5.1984606E 02  |
| 17 Q17 | 5.3723407E 02     | -6.7627921E 00     | 5.3047129E 02  |
| 18 Q18 | -4.8241108E-06    | -7.6764398E 00     | -7.6764446E 00 |
| 19 Q25 | -2.6699981E 01    | -4.6833497E 01     | -7.3533478E 01 |
| 20 Q30 | -1.7391422E 02    | -9.1351180E 01     | -2.6526540E 02 |
| 21 Q31 | 3.5888770E 01     | 5.3823454E 01      | 8.9712224E 01  |
| 22 Q32 | 9.7712528E 00     | 5.1147013E 01      | 6.0918266E 01  |
| 23 Q33 | 1.5800180E 01     | 3.4129132E-01      | 1.6141472E 01  |
| 24 Q34 | -3.0526289E 01    | -1.0086593E 01     | -4.0612882E 01 |
| 25 Q35 | 4.2310161E 01     | 3.3400918E 01      | 7.5711079E 01  |
| 26 Q36 | -2.8678330E 01    | 9.4231141E 00      | -1.9255216E 01 |
| 27 Q37 | -4.6477203E 01    | -4.9798575E 01     | -9.6275778E 01 |
| 28 Q38 | -4.0915276E 01    | -2.4465424E 01     | -6.5380700E 01 |
| 29 P40 | -1.2240327E 03    | -1.5349053E 03     | -2.7589381E 03 |
| 30 P41 | -1.7110282E 03    | -1.8364288E 03     | -3.5474569E 03 |
| 31 P42 | -4.0843139E 03    | -2.7966869E 03     | -6.8810008E 03 |
| 32 P43 | -8.2216938E 03    | -4.0494495E 03     | -1.2271143E 04 |
| 33 P44 | -8.2175832E 03    | -4.0474249E 03     | -1.2265008E 04 |
| 34 P45 | -1.4470919E 04    | -6.6750438E 03     | -2.1145962E 04 |
| 35 P46 | -2.0924785E 04    | -9.7154397E 03     | -3.0640225E 04 |
| 36 P47 | -2.9293683E 04    | -9.7474668E 03     | -3.9041149E 04 |
| 37 P48 | -3.7378126E 04    | -9.9610465E 03     | -4.7339172E 04 |
| 38 P49 | -3.7378126E 04    | 3.2065446E-05      | -3.7378126E 04 |
| 39 P50 | 7.6239251E 02     | 7.6624249E 02      | 1.5286350E 03  |
| 40 P51 | -6.8755784E 02    | -8.4475118E 02     | -1.5323090E 03 |
| 41 P52 | -3.0368104E 03    | -2.2121041E 03     | -5.2489145E 03 |
| 42 P53 | -7.7838430E 03    | -5.2658656E 03     | -1.3049709E 04 |
| 43 P54 | -6.5547294E 03    | -4.4343550E 03     | -1.0989084E 04 |
| 44 P55 | -1.1472086E 04    | -5.8158851E 03     | -1.7287971E 04 |
| 45 P56 | -1.7639354E 04    | -7.5002064E 03     | -2.5139561E 04 |
| 46 P57 | -1.6812070E 04    | -7.1484468E 03     | -2.3960516E 04 |
| 47 P58 | -2.3030225E 04    | -5.6400332E 03     | -2.8670259E 04 |
| 48 P59 | -2.9751643E 04    | -3.8249249E 03     | -3.3576567E 04 |
| 49 P60 | -2.9751643E 04    | 6.3652648E-06      | -2.9751643E 04 |
| 50 P62 | 4.2259390E 02     | 1.8423457E 02      | 6.0682846E 02  |

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| PT     | S2.0<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 4.2250920E 02     | 1.8419764E 02      | 6.0670684E 02  |
| 52 P64 | 8.5516481E 01     | 4.7016125E 00      | 9.0218095E 01  |
| 53 P67 | 5.4160569E 02     | 6.9831501E 01      | 6.1143718E 02  |
| 54 P68 | 5.4149719E 02     | 6.9817497E 01      | 6.1131438E 02  |
| 55 P69 | 1.7963196E 02     | 4.0716000E 01      | 2.2034796E 02  |
| 56 P72 | -9.0269969E 01    | -4.7186183E 02     | -5.6213179E 02 |
| 57 P73 | -9.0251930E 01    | -4.7176729E 02     | -5.6201922E 02 |
| 58 P74 | 3.1041939E 02     | 1.0306176E 02      | 4.1348115E 02  |
| 59 P77 | 3.0599441E 03     | 1.1160001E 03      | 4.1759442E 03  |
| 60 P79 | 2.1982009E 03     | 7.1728020E 02      | 2.9154810E 03  |
| 61 P80 | 2.1977604E 03     | 7.1713648E 02      | 2.9148968E 03  |
| 62 P81 | -2.2883818E 01    | -1.2041926E 02     | -1.4330308E 02 |
| 63 P82 | 3.2861893E 02     | 1.4019364E 02      | 4.6881256E 02  |
| 64 P83 | -3.8862498E 02    | 1.1802201E 03      | 7.9159512E 02  |
| 65 P84 | -1.3027294E 03    | 1.2547048E 03      | -4.8024628E 01 |
| 66 P93 | -2.2489060E 02    | -2.6024972E 02     | -4.8514032E 02 |
| 67 P94 | -6.8791146E 02    | -6.3244309E 02     | -1.3203546E 03 |
| 68 P95 | -9.7693117E 02    | -7.6980507E 02     | -1.7467362E 03 |
| 69 P96 | 4.3262694E 03     | 4.2232257E 03      | 8.5494951E 03  |
| 70 P97 | 5.2111707E 03     | 8.8624148E 00      | 5.2200331E 03  |
| 71 Q19 | 5.6843956E 01     | 2.3938109E 01      | 8.0782064E 01  |
| 72 Q20 | 4.4592918E 01     | 9.7608637E 00      | 5.4353781E 01  |
| 73 Q21 | 1.7690547E 01     | -2.0152159E 01     | -2.4616115E 00 |
| 74 Q22 | -7.5327709E 00    | -4.0427594E 01     | -4.7960365E 01 |
| 75 Q23 | 1.6410844E 01     | -9.2576944E 00     | 7.1531495E 00  |
| 76 Q24 | 6.6723086E-01     | -1.6740142E 01     | -1.6072911E 01 |
| 77 Q26 | 2.6518879E 01     | -4.8979445E 00     | 2.1620934E 01  |
| 78 Q28 | 2.6709307E 01     | -4.7665953E 01     | -2.0956646E 01 |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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|    |     | 52.0<br>SYMMETRIC | -08.96<br>ANTI-SYM |                 |     |
|----|-----|-------------------|--------------------|-----------------|-----|
| WT |     |                   |                    |                 |     |
| 1  | 01  | -2.6721455E 01    | 9.4265770E 01      | 7.1546521E 01   | 01  |
| 2  | 02  | -3.9906010E 01    | 7.6126010E 01      | 3.8220029E 01   | 01  |
| 3  | 03  | -1.3759665E 02    | 9.0165514E 01      | -4.7231615E 01  | 01  |
| 4  | 04  | -2.1693261E 02    | 9.9666578E 01      | -1.1688586E 02  | 02  |
| 5  | 05  | -3.1761702E 02    | 1.7706211E 02      | -1.4056871E 02  | 02  |
| 6  | 06  | -3.2780112E 02    | 1.5601694E 02      | -1.7572019E 02  | 02  |
| 7  | 07  | -4.5217201E 02    | 6.5115714E 00      | -6.4586121E 02  | 02  |
| 8  | 08  | -4.3679620E 02    | 2.0567189E 01      | -4.1644771E 02  | 02  |
| 9  | 09  | 8.5281121E -06    | -6.9966614E 02     | -6.9966612E 02  | 02  |
| 10 | 010 | 2.117956E 01      | 1.5965564E 01      | 3.7122119E 01   | 01  |
|    |     |                   |                    |                 |     |
| 11 | 011 | 8.5518612E 01     | -6.4625108E 01     | 2.1093104E 01   | 01  |
| 12 | 012 | 1.2629719E 02     | -6.1121817E 01     | 6.2971526E 01   | 01  |
| 13 | 013 | 1.5556621E 02     | -1.1286214E 02     | 8.2522073E 01   | 01  |
| 14 | 014 | 2.1155963E 02     | -1.2866747E 02     | 8.2491965E 01   | 01  |
| 15 | 015 | 2.7185665E 02     | -1.6571132E 02     | 1.2814529E 02   | 02  |
| 16 | 016 | 5.1803015E 02     | -3.5712566E 01     | 6.7611619E 02   | 02  |
| 17 | 017 | 5.3721607E 02     | -1.3746571E 01     | 5.2347950E 02   | 02  |
| 18 | 018 | -4.8241108E -06   | 9.1661309E 00      | 9.1661261E 00   | 00  |
| 19 | 019 | -2.6679981E 01    | 5.8761638E 01      | 3.2081657E 01   | 01  |
| 20 | 020 | -1.7391622E 02    | 1.0961952E 02      | -6.6422470E 01  | 01  |
|    |     |                   |                    |                 |     |
| 21 | 031 | 3.9888770E 01     | -6.6874607E 01     | -3.0915817E 01  | 01  |
| 22 | 032 | 9.7712528E 00     | -6.4089835E 01     | -9.4118582E 01  | 01  |
| 23 | 033 | 1.5800180E 01     | -1.8196554E 00     | 1.1960525E 01   | 01  |
| 24 | 034 | -3.0426289E 01    | 1.0747275E 01      | -1.9772014E 01  | 01  |
| 25 | 035 | 4.2110161E 01     | -4.1461310E 01     | 8.4885025E -01  | -01 |
| 26 | 036 | -2.8678110E 01    | -1.1568982E 01     | -4.0247112E 01  | 01  |
| 27 | 037 | -4.6647720E 01    | 6.1828212E 01      | 1.5351008E 01   | 01  |
| 28 | 038 | -4.0915276E 01    | 3.2571768E 01      | -8.1415087E 00  | 00  |
| 29 | P40 | -1.2240127E 03    | 1.8445067E 03      | 6.2047392E 02   | 02  |
| 30 | P41 | -1.7110282E 03    | 2.2342573E 03      | 9.2322409E 02   | 02  |
|    |     |                   |                    |                 |     |
| 31 | P42 | -4.0643119E 03    | 3.3777543E 03      | -6.8655460E 02  | 02  |
| 32 | P43 | -8.2216938E 03    | 4.9712773E 03      | -3.2504165E 03  | 03  |
| 33 | P44 | -8.2175832E 03    | 4.9687917E 03      | -3.2487915E 03  | 03  |
| 34 | P45 | -1.4470919E 04    | 8.4547509E 03      | -6.0161677E 03  | 03  |
| 35 | P46 | -2.0924785E 04    | 1.1487037E 04      | -9.4377483E 03  | 03  |
| 36 | P47 | -2.9293683E 04    | 1.1607502E 04      | -1.7686181E 04  | 04  |
| 37 | P48 | -3.7378126E 04    | 1.1987624E 04      | -2.5390501E 04  | 04  |
| 38 | P49 | -3.7378126E 04    | -3.2555619E -05    | -1.7378126E 04  | 04  |
| 39 | P50 | 7.6239251E 02     | -9.0966111E 02     | -1.64727060E 02 | 02  |
| 40 | P51 | -6.8755784E 02    | 1.0398031E 03      | 3.5224522E 02   | 02  |
|    |     |                   |                    |                 |     |
| 41 | P52 | -3.0368104E 03    | 2.6895865E 03      | -3.4722387E 02  | 02  |
| 42 | P53 | -7.7838430E 03    | 6.3583623E 03      | -1.64254807E 03 | 03  |
| 43 | P54 | -6.5547294E 03    | 5.1543399E 03      | -1.2003895E 03  | 03  |
| 44 | P55 | -1.1472086E 04    | 6.8905140E 03      | -4.5815725E 03  | 03  |
| 45 | P56 | -1.7619354E 04    | 8.7134307E 03      | -8.9059236E 03  | 03  |
| 46 | P57 | -1.6812070E 04    | 8.3238330E 03      | -8.4882368E 03  | 03  |
| 47 | P58 | -2.3030225E 04    | 6.9542598E 03      | -1.6074965E 04  | 04  |
| 48 | P59 | -2.9751643E 04    | 5.1804630E 03      | -2.4571180E 04  | 04  |
| 49 | P60 | -2.9751643E 04    | -7.4040030E -06    | -2.9751643E 04  | 04  |
| 50 | P62 | 4.2254390E 02     | -2.1948715E 02     | 2.0260675E 02   | 02  |

# INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PI     | SYMMETRIC      | ANTI-SYM       | S - AS         |
|--------|----------------|----------------|----------------|
| 51 P63 | 4.22509701 02  | -2.19941061 02 | 2.02566191 02  |
| 52 P66 | 8.55166811 01  | -3.86597611 00 | 8.16704881 01  |
| 53 P67 | 5.61605691 02  | -7.96160431 01 | 4.61989641 02  |
| 54 P68 | 5.61697191 02  | -7.96000771 01 | 4.61697171 02  |
| 55 P69 | 1.79631961 02  | -4.90210011 01 | 1.30410961 02  |
| 56 P72 | -9.02699691 01 | 3.55120221 02  | 4.66878291 02  |
| 57 P73 | -9.02515101 01 | 3.55017001 02  | 4.66765071 02  |
| 58 P76 | 3.10619191 02  | -1.28500371 02 | 1.81919021 02  |
| 59 P77 | 3.05796411 01  | -1.38943161 01 | 1.67051271 03  |
| 60 P79 | 2.19870091 03  | -9.12665991 02 | 1.78551531 03  |
| 61 P80 | 2.19776061 03  | -9.12462701 02 | 1.78527771 03  |
| 62 P81 | -2.28618181 01 | 1.38616591 02  | 1.15752771 02  |
| 63 P82 | 3.28618911 02  | -2.01386311 02 | 1.27232611 02  |
| 64 P83 | -1.88624981 02 | -1.13419931 03 | -1.52307491 03 |
| 65 P86 | -1.30272941 03 | -1.20874611 03 | -2.51151551 03 |
| 66 P93 | -2.24890601 02 | 3.19515071 02  | 2.66246751 01  |
| 67 P94 | -6.67911661 02 | 7.71465261 02  | 8.40717931 01  |
| 68 P95 | -9.76931171 02 | 9.32370081 02  | -4.45610881 01 |
| 69 P96 | 4.32626961 03  | -5.14811271 03 | -8.22041321 02 |
| 70 P97 | 5.21117071 03  | -2.22310761 02 | 4.98884001 03  |
| 71 Q19 | 5.65439581 01  | -2.66040941 01 | 3.02198611 01  |
| 72 Q20 | 4.45729181 01  | -9.19833651 00 | 3.51945821 01  |
| 73 Q21 | 1.76905471 01  | 2.67498971 01  | 4.44604441 01  |
| 74 Q22 | -7.53277091 00 | 5.14184581 01  | 4.38856871 01  |
| 75 Q23 | 1.66410841 01  | 1.38649591 01  | 3.02558021 01  |
| 76 Q24 | 6.67230861 -01 | 2.25815151 01  | 2.32487461 01  |
| 77 Q26 | 2.65188791 01  | 7.97026941 00  | 3.45091481 01  |
| 78 Q28 | 2.67091071 01  | 5.44952071 01  | 8.12045131 01  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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|    |     | 57.0            |     | 00.00           |     |                |
|----|-----|-----------------|-----|-----------------|-----|----------------|
|    |     | SYMMETRIC       |     | ANTI-SYM        |     | S + AS         |
| 1  | Q1  | -2.6721659E 01  | 01  | -2.5441581E 01  | 01  | -5.2163036E 01 |
| 2  | Q2  | -3.5906010E 01  | 01  | -4.5615671E 01  | 01  | -8.1522680E 01 |
| 3  | Q3  | -1.3754665E 02  | 02  | -5.6571453E 01  | 01  | -1.9617250E 02 |
| 4  | Q4  | -2.1453261E 02  | 02  | -7.0773186E 01  | 01  | -2.8530630E 02 |
| 5  | Q5  | -3.1763782E 02  | 02  | -5.7859182E 01  | 01  | -3.7549700E 02 |
| 6  | Q6  | -3.2780712E 02  | 02  | -4.2855625E 01  | 01  | -3.7066279E 02 |
| 7  | Q7  | -4.5237281E 02  | 02  | 8.7982782E 01   | 01  | -3.6639003E 02 |
| 8  | Q8  | -4.3699640E 02  | 02  | 7.4307739E 01   | 01  | -3.4268917E 02 |
| 9  | Q9  | 8.5283141E -06  | -06 | 1.0304002E 02   | 02  | 1.0304003E 02  |
| 10 | Q10 | 2.1174556E 01   | 01  | 8.5448621E 00   | 00  | 2.4724418E 01  |
| 11 | Q11 | 8.5518612E 01   | 01  | 1.6179562E 01   | 01  | 1.0149817E 02  |
| 12 | Q12 | 1.2629736E 02   | 02  | 3.6031133E 01   | 01  | 1.6237867E 02  |
| 13 | Q13 | 1.4536471E 02   | 02  | 4.1716892E 01   | 01  | 2.3707910E 02  |
| 14 | Q14 | 2.1135943E 02   | 02  | 3.3949550E 01   | 01  | 2.6550898E 02  |
| 15 | Q15 | 2.7185665E 02   | 02  | 6.3664874E 01   | 01  | 3.3552193E 02  |
| 16 | Q16 | 5.1003075E 02   | 02  | 2.0596797E 01   | 01  | 5.3062754E 02  |
| 17 | Q17 | 5.3723407E 02   | 02  | 3.2522914E 01   | 01  | 5.6975698E 02  |
| 18 | Q18 | -4.8241108E -06 | -06 | -4.5847157E 00  | 00  | -4.5847234E 00 |
| 19 | Q19 | -2.6699981E 01  | 01  | 1.0923471E 01   | 01  | -1.5776510E 01 |
| 20 | Q20 | -1.7391422E 02  | 02  | -1.6744550E 01  | 01  | -1.9065877E 02 |
| 21 | Q21 | 3.5888770E 01   | 01  | -1.4157938E 01  | 01  | 2.1730831E 01  |
| 22 | Q22 | 9.7712528E 00   | 00  | -2.4662849E 01  | 01  | -1.4841596E 01 |
| 23 | Q23 | 1.5800180E 01   | 01  | -4.0016121E 00  | 00  | 1.1748568E 01  |
| 24 | Q24 | -3.0526289E 01  | 01  | -1.5758514E 01  | 01  | -4.6284803E 01 |
| 25 | Q25 | 4.2310161E 01   | 01  | -9.8931588E 00  | 00  | 3.2417003E 01  |
| 26 | Q26 | -2.8678330E 01  | 01  | -2.3276033E 01  | 01  | -5.1954362E 01 |
| 27 | Q27 | -4.6647720E 01  | 01  | -7.1728755E 00  | 00  | -5.3650079E 01 |
| 28 | Q28 | -4.0415276E 01  | 01  | 9.0512493E 00   | 00  | -3.1863477E 01 |
| 29 | P40 | -1.2240327E 03  | 03  | -8.6938715E 01  | 01  | -1.3109714E 03 |
| 30 | P41 | -1.7110282E 03  | 03  | -9.4034400E 02  | 02  | -2.6513722E 03 |
| 31 | P42 | -4.0843139E 03  | 03  | -2.1069266E 03  | 03  | -6.1912404E 03 |
| 32 | P43 | -8.2216938E 03  | 03  | -3.8656527E 03  | 03  | -1.2087346E 04 |
| 33 | P44 | -8.2175832E 03  | 03  | -3.8637200E 03  | 03  | -1.2081303E 04 |
| 34 | P45 | -1.4470919E 04  | 04  | -5.0027936E 03  | 03  | -1.9473712E 04 |
| 35 | P46 | -2.0424785E 04  | 04  | -5.8465353E 03  | 03  | -2.6771320E 04 |
| 36 | P47 | -2.4293683E 04  | 04  | -4.2188538E 03  | 03  | -3.3512536E 04 |
| 37 | P48 | -3.7378126E 04  | 04  | -2.4741608E 03  | 03  | -3.9852287E 04 |
| 38 | P49 | -3.7378126E 04  | 04  | 1.9226402E -05  | -05 | -3.7378126E 04 |
| 39 | P50 | 7.6239251E 02   | 02  | -3.5901390E 02  | 02  | 4.0337861E 02  |
| 40 | P51 | -6.8755784E 02  | 02  | -4.6011946E 02  | 02  | -1.1476773E 03 |
| 41 | P52 | -3.0368104E 03  | 03  | -9.5935748E 02  | 02  | -3.9961679E 03 |
| 42 | P53 | -7.7838430E 03  | 03  | -1.6175810E 03  | 03  | -9.4014241E 03 |
| 43 | P54 | -6.5547244E 03  | 03  | -1.3121556E 03  | 03  | -7.9168850E 03 |
| 44 | P55 | -1.1472086E 04  | 04  | -2.9005380E 03  | 03  | -1.4372624E 04 |
| 45 | P56 | -1.7639354E 04  | 04  | -5.0528108E 03  | 03  | -2.2692165E 04 |
| 46 | P57 | -1.6812070E 04  | 04  | -4.8158342E 03  | 03  | -2.1627904E 04 |
| 47 | P58 | -2.3030225E 04  | 04  | -4.8871008E 03  | 03  | -2.7917326E 04 |
| 48 | P59 | -2.9751643E 04  | 04  | -5.1790004E 03  | 03  | -3.4930643E 04 |
| 49 | P60 | -2.9751643E 04  | 04  | -5.3066286E -06 | -06 | -2.9751643E 04 |
| 50 | P62 | 4.2259390E 02   | 02  | 1.1003317E 02   | 02  | 5.3262706E 02  |

# INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | 57.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|-------------------|----------------|
| 51 P63 | 4.2250920E 02     | 1.1001111E 02     | 5.3252031E 02  |
| 52 P64 | 8.5516481E 01     | 3.6712172E 01     | 1.2227869E 02  |
| 53 P67 | 5.4160549E 02     | 8.7674375E 01     | 6.2838005E 02  |
| 54 P68 | 5.4164719E 02     | 8.7656806E 01     | 6.2915199E 02  |
| 55 P69 | 1.7463196E 02     | 4.6389421E 01     | 2.3852138E 02  |
| 56 P72 | -4.0264969E 01    | -1.8861680E 02    | -2.7884677E 02 |
| 57 P73 | -4.0251410E 01    | -1.4857900E 02    | -2.7881043E 02 |
| 58 P76 | 3.1061439E 02     | 6.0143356E 01     | 3.7061275E 02  |
| 59 P77 | 3.0599641E 02     | 1.1603541E 02     | 4.2207981E 02  |
| 60 P79 | 2.1462009E 02     | 5.4632774E 02     | 7.6095786E 02  |
|        |                   |                   |                |
| 61 P80 | 2.1977604E 02     | 5.9420862E 02     | 2.7919690E 02  |
| 62 P81 | -2.2883818E 01    | -7.9542395E 01    | -1.0247621E 02 |
| 63 P82 | 3.2861843E 02     | 3.7902612E 01     | 3.6652194E 02  |
| 64 P83 | -3.8862448E 02    | 8.7875048E 02     | 4.9012570E 02  |
| 65 P84 | -1.3027244E 02    | 1.0499696E 01     | -2.3275986E 02 |
| 66 P93 | -2.2489060E 02    | -2.2270021E 02    | -4.4759080E 02 |
| 67 P94 | -6.8791146E 02    | -3.5753898E 02    | -1.0454904E 02 |
| 68 P95 | -4.7643117E 02    | -3.8125777E 02    | -1.3561889E 02 |
| 69 P96 | 4.3262644E 02     | 8.6946716E 01     | 4.4132141E 02  |
| 70 P97 | 5.2111707E 02     | 3.5944406E 02     | 5.5711148E 02  |
|        |                   |                   |                |
| 71 Q19 | 5.6863956E 01     | -8.2446572E 00    | 4.8544298E 01  |
| 72 Q20 | 4.4542918E 01     | -2.0376373E 01    | 2.4216545E 01  |
| 73 Q21 | 1.7640547E 01     | 1.1449884E 01     | 2.9140432E 01  |
| 74 Q22 | -7.5327709E 00    | 4.1044679E 00     | -3.4283029E 00 |
| 75 Q23 | 1.6410844E 01     | 1.2679431E 01     | 2.9090275E 01  |
| 76 Q24 | 6.6723086E -01    | 1.1387411E 01     | 1.2054662E 01  |
| 77 Q26 | 2.6518879E 01     | 3.1692695E 01     | 5.8211574E 01  |
| 78 Q28 | 2.6709307E 01     | 4.0529625E 01     | 6.7238932E 01  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

PAGE 200

| PI |     | SI.O<br>SYMMETRIC | 015.00<br>ANTI-SYM | S + AS          |
|----|-----|-------------------|--------------------|-----------------|
| 1  | Q1  | -5.0649450E 00    | -1.0540874E 02     | -1.1047371E 02  |
| 2  | Q2  | 5.1248043E 00     | -2.0354537E 01     | -1.7224935E 01  |
| 3  | Q3  | -8.4478389E 01    | -2.0311373E 01     | -1.1024171E 02  |
| 4  | Q4  | -1.4588404E 02    | -1.6347441E 00     | -1.6752879E 02  |
| 5  | Q5  | -2.3242262E 02    | -1.4877550E 02     | -3.8114813E 02  |
| 6  | Q6  | -2.5068440E 02    | -1.4187433E 02     | -3.4255923E 02  |
| 7  | Q7  | -3.8441149E 02    | -1.4558878E 02     | -5.3900047E 02  |
| 8  | Q8  | -3.7276616E 02    | -1.8232740E 02     | -5.5508855E 02  |
| 9  | Q9  | 6.8726580E -06    | 4.6365477E 02      | 4.6365980E 02   |
| 10 | Q10 | 1.2456907E 01     | -4.6848817E 01     | -3.1841411E 01  |
| 11 | Q11 | 6.4536850E 01     | 6.4301719E 01      | 1.3483857E 02   |
| 12 | Q12 | 4.4224246E 01     | 1.8500766E 01      | 1.1273001E 02   |
| 13 | Q13 | 1.5641853E 02     | 8.4755386E 01      | 2.4167391E 02   |
| 14 | Q14 | 1.8584812E 02     | 1.2861191E 02      | 3.1448003E 02   |
| 15 | Q15 | 2.1305606E 02     | 8.5204673E 01      | 2.9826073E 02   |
| 16 | Q16 | 3.4816408E 02     | -6.1053420E 01     | 2.8711017E 02   |
| 17 | Q17 | 3.5074263E 02     | -1.2627818E 02     | 2.2456445E 02   |
| 18 | Q18 | -3.1050655E -06   | -4.0643377E 00     | -4.0644410E 00  |
| 19 | Q19 | -3.3045564E 01    | -1.2111080E 02     | -1.5415637E 02  |
| 20 | Q20 | -1.4824601E 02    | -1.3253740E 02     | -2.8078341E 02  |
| 21 | Q31 | 4.4441541E 01     | 1.4000876E 02      | 1.8450035E 02   |
| 22 | Q32 | 2.7355705E 01     | 1.6024214E 02      | 1.8757784E 02   |
| 23 | Q33 | 1.6284904E 01     | 1.1897854E 01      | 2.8114495E 01   |
| 24 | Q34 | -1.4104441E 01    | 1.8976488E 01      | -1.2775305E -01 |
| 25 | Q35 | 4.7280228E 01     | 8.8936539E 01      | 1.3621677E 02   |
| 26 | Q36 | -8.1950011E 00    | 7.2464811E 01      | 6.4269810E 01   |
| 27 | Q37 | -3.7481707E 01    | -8.5120282E 01     | -1.2310199E 02  |
| 28 | Q38 | -4.0178907E 01    | -7.1522223E 01     | -1.1170113E 02  |
| 29 | P40 | -1.0984634E 03    | -2.7860372E 03     | -3.8850006E 03  |
| 30 | P41 | -8.8135439E 02    | -1.5174463E 03     | -2.3988506E 03  |
| 31 | P42 | -2.3077833E 03    | -7.7608559E 02     | -3.0838689E 03  |
| 32 | P43 | -4.8480107E 03    | 6.6101754E 02      | -4.1869932E 03  |
| 33 | P44 | -4.8455869E 03    | 6.6068715E 02      | -4.1848997E 03  |
| 34 | P45 | -9.4212906E 03    | -2.2682559E 03     | -1.1684546E 04  |
| 35 | P46 | -1.4356775E 04    | -5.0614777E 03     | -1.9418253E 04  |
| 36 | P47 | -2.1560891E 04    | -7.7548704E 03     | -2.9315761E 04  |
| 37 | P48 | -2.8457066E 04    | -1.1127834E 04     | -3.9584900E 04  |
| 38 | P49 | -2.8457066E 04    | 1.4921554E -05     | -2.8457066E 04  |
| 39 | P50 | 1.0162937E 03     | 2.2466645E 03      | 3.2624583E 03   |
| 40 | P51 | -2.8486936E 02    | -6.6779217E 02     | -9.5266153E 02  |
| 41 | P52 | -2.1171684E 03    | -2.1821747E 03     | -4.2993431E 03  |
| 42 | P53 | -6.1780022E 03    | -6.5829456E 03     | -1.2760948E 04  |
| 43 | P54 | -5.2024598E 03    | -5.5434601E 03     | -1.0745920E 04  |
| 44 | P55 | -8.6687360E 03    | -4.4015982E 03     | -1.3070334E 04  |
| 45 | P56 | -1.2697212E 04    | -2.3626297E 03     | -1.5059842E 04  |
| 46 | P57 | -1.2101713E 04    | -2.2518222E 03     | -1.4353535E 04  |
| 47 | P58 | -1.5800198E 04    | 1.3296173E 03      | -1.4470580E 04  |
| 48 | P59 | -1.9547310E 04    | 6.1167808E 03      | -1.3430529E 04  |
| 49 | P60 | -1.9547310E 04    | 2.6852725E -05     | -1.9547310E 04  |
| 50 | P62 | 3.2242403E 02     | 9.7664125E 01      | 4.2008815E 02   |



# INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PI     | 51.0<br>SYMMETRIC | 015.00<br>ANTI-SYM | 5.0 AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 3.2215941E 02     | 9.7644585E 01      | 4.7000399E 02  |
| 52 P64 | 5.4411449E 01     | -7.4862802E 01     | -2.5431353E 01 |
| 53 P67 | 4.7273870E 02     | -7.8798787E 01     | 3.4343991E 02  |
| 54 P68 | 4.7264400E 02     | -7.8783011E 01     | 3.9386100E 02  |
| 55 P69 | 1.3686458E 02     | -2.8701252E 01     | 1.0816833E 02  |
| 56 P72 | 8.7501903E 00     | -5.0164432E 02     | -4.9444793E 02 |
| 57 P73 | 8.7486115E 00     | -5.0159746E 02     | -4.9484885E 02 |
| 58 P74 | 2.125216E 02      | 6.4622294E 01      | 3.0587446E 02  |
| 59 P77 | 1.8511757E 03     | -4.4757466E 02     | 1.4036011E 03  |
| 60 P79 | 1.4700816E 03     | 5.2738956E 01      | 1.5228205E 03  |
|        |                   |                    |                |
| 61 P80 | 1.4697870E 03     | 5.2728381E 01      | 1.5225154E 03  |
| 62 P81 | 1.4674313E 01     | -5.8798329E 01     | -4.4124016E 01 |
| 63 P82 | 2.1609488E 02     | 2.1600464E 02      | 4.3209952E 02  |
| 64 P83 | -1.8546814E 02    | 3.0193402E 02      | 1.1846568E 02  |
| 65 P84 | -1.3585731E 03    | 3.2538471E 01      | -1.3260346E 03 |
| 66 P93 | -2.8197345E 01    | -2.4567849E 01     | -5.2765194E 01 |
| 67 P94 | -3.6261668E 02    | -4.5102422E 02     | -8.1364590E 02 |
| 68 P95 | -6.4533183E 02    | -6.5612582E 02     | -1.3014576E 03 |
| 69 P96 | 3.6903849E 03     | 6.3752236E 03      | 1.0085608E 04  |
| 70 P97 | 3.4026887E 03     | -1.1849407E 03     | 2.2177480E 03  |
|        |                   |                    |                |
| 71 Q19 | 6.0498706E 01     | 5.8249201E 01      | 1.1874791E 02  |
| 72 Q20 | 5.8962642E 01     | 5.6910854E 01      | 1.1587349E 02  |
| 73 Q21 | 8.6689847E 00     | -7.1035326E 01     | -6.2366341E 01 |
| 74 Q22 | -9.5486928E 00    | -9.4267039E 01     | -1.0381573E 02 |
| 75 Q23 | 8.5232950E 00     | -5.2334628E 01     | -4.3811333E 01 |
| 76 Q24 | -6.8768951E 00    | -6.3506744E 01     | -7.0383639E 01 |
| 77 Q26 | 7.1092359E 00     | -8.5367994E 01     | -8.3258759E 01 |
| 78 Q28 | -1.8031966E 01    | -1.8391396E 02     | -2.0194593E 02 |

# INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PI     | SILO<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 01   | -5.0644650E 00    | 1.4496757E 02      | 1.3940260E 02  |
| 2 02   | 3.1296043E 00     | 4.3047649E 01      | 4.6177294E 01  |
| 3 03   | -8.9978389E 01    | 5.0046958E 01      | -3.9931431E 01 |
| 4 04   | -1.4588904E 02    | 3.4178314E 01      | -1.1171073E 02 |
| 5 05   | -2.3242767E 02    | 2.3102986E 02      | -1.3927612E 00 |
| 6 06   | -2.5068470E 02    | 2.1968657E 02      | -3.0498983E 01 |
| 7 07   | -3.8941169E 02    | 2.3447045E 02      | -1.5494124E 02 |
| 8 08   | -3.7276616E 02    | 2.8011406E 02      | -9.2652096E 01 |
| 9 09   | 6.8726580E -06    | -8.0228479E 02     | -8.0228479E 02 |
| 10 010 | 1.2956407E 01     | 5.5349714E 01      | 6.8306670E 01  |
| 11 011 | 6.4536850E 01     | -9.6284728E 01     | -2.6747879E 01 |
| 12 012 | 9.4224246E 01     | -4.4128879E 01     | 5.0100367E 01  |
| 13 013 | 1.5641853E 02     | -1.3508118E 02     | 2.1837349E 01  |
| 14 014 | 1.8544812E 02     | -1.8861921E 02     | -2.7710896E 00 |
| 15 015 | 2.1305606E 02     | -1.4559719E 02     | 6.7458873E 01  |
| 16 016 | 3.4816408E 02     | -2.3977704E 01     | 3.2418638E 02  |
| 17 017 | 3.5079263E 02     | 5.2613494E 01      | 4.0340663E 02  |
| 18 018 | -3.1050655E -06   | 7.9705105E 00      | 7.9705074E 00  |
| 19 025 | -3.3045569E 01    | 1.5231504E 02      | 1.1926947E 02  |
| 20 030 | -1.4824601E 02    | 1.9103079E 02      | 4.2784774E 01  |
| 21 031 | 4.4491541E 01     | -1.7781692E 02     | -1.3302533E 02 |
| 22 032 | 2.7355705E 01     | -1.9806925E 02     | -1.7071355E 02 |
| 23 033 | 1.6289041E 01     | -1.3949986E 01     | 2.3340551E 00  |
| 24 034 | -1.9104441E 01    | -1.6709819E 01     | -3.5814260E 01 |
| 25 035 | 4.7280228E 01     | -1.1292153E 02     | -6.5641300E 01 |
| 26 036 | -8.1950011E 00    | -8.2993039E 01     | -9.1188040E 01 |
| 27 037 | -3.7981707E 01    | 1.1337843E 02      | 7.5346726E 01  |
| 28 038 | -4.0178907E 01    | 9.1916910E 01      | 5.1738004E 01  |
| 29 P40 | -1.0989634E 03    | 3.7010760E 03      | 2.6021126E 03  |
| 30 P41 | -8.8135439E 02    | 2.3878279E 03      | 1.5064735E 03  |
| 31 P42 | -2.3077833E 03    | 1.9327291E 03      | -3.7505415E 02 |
| 32 P43 | -4.8480107E 03    | 8.6290494E 02      | -3.9851058E 03 |
| 33 P44 | -4.8455869E 03    | 8.6247333E 02      | -3.9831136E 03 |
| 34 P45 | -9.4212906E 03    | 5.4107578E 03      | -4.0105327E 03 |
| 35 P46 | -1.4356775E 04    | 9.7359459E 03      | -4.6208293E 03 |
| 36 P47 | -2.1560891E 04    | 1.4072725E 04      | -7.4881662E 03 |
| 37 P48 | -2.8457066E 04    | 1.9254835E 04      | -9.2022309E 03 |
| 38 P49 | -2.8457066E 04    | -2.0961867E -05    | -2.8457066E 04 |
| 39 P50 | 1.0162939E 03     | -2.8336464E 03     | -1.8173525E 03 |
| 40 P51 | -2.8486936E 02    | 1.0548714E 03      | 7.7000204E 02  |
| 41 P52 | -2.1171684E 03    | 3.3075199E 03      | 1.1903514E 03  |
| 42 P53 | -6.1780022E 03    | 9.4511458E 03      | 3.2731436E 03  |
| 43 P54 | -5.2024598E 03    | 7.9587550E 03      | 2.7562952E 03  |
| 44 P55 | -8.6687360E 03    | 7.3620555E 03      | -1.3066876E 03 |
| 45 P56 | -1.2697212E 04    | 5.8766488E 03      | -6.8205636E 03 |
| 46 P57 | -1.2101713E 04    | 5.6010337E 03      | -6.5006797E 03 |
| 47 P58 | -1.5800198E 04    | 2.5105518E 03      | -1.3289646E 04 |
| 48 P59 | -1.9547310E 04    | -1.9968771E 03     | -2.1544187E 04 |
| 49 P60 | -1.9547310E 04    | -2.9057250E -05    | -1.9547310E 04 |
| 50 P62 | 3.2242403E 02     | -1.9129227E 02     | 1.3113176E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PI     | 51.00<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|--------------------|--------------------|----------------|
| 51 P63 | 3.2235941E 02      | -1.9125397E 02     | 1.3110949E 02  |
| 52 P64 | 5.4411449E 01      | 8.1960884E 01      | 1.3837233E 02  |
| 53 P67 | 4.7273870E 02      | 5.0864359E 01      | 5.2360306E 02  |
| 54 P68 | 4.7264400E 02      | 5.0854187E 01      | 5.2349819E 02  |
| 55 P69 | 1.3686958E 02      | 1.2005733E 01      | 1.4887531E 02  |
| 56 P72 | 8.7503903E 00      | 7.0633906E 02      | 7.1508945E 02  |
| 57 P73 | 8.7486115E 00      | 7.0619760E 02      | 7.1494621E 02  |
| 58 P74 | 2.4125216E 02      | -1.2197190E 02     | 1.1924026E 02  |
| 59 P77 | 1.8511757E 03      | -4.0337949E 01     | 1.8108378E 03  |
| 60 P79 | 1.4700816E 03      | -4.4762934E 02     | 1.0224522E 03  |
| 61 P80 | 1.4697870E 03      | -4.4753962E 02     | 1.0222474E 03  |
| 62 P81 | 1.4674313E 01      | 9.4896653E 01      | 1.0957097E 02  |
| 63 P82 | 2.1609488E 02      | -3.3272498E 02     | -1.1663010E 02 |
| 64 P83 | -1.8546834E 02     | -2.0669116E 02     | -3.9215949E 02 |
| 65 P84 | -1.3585731E 03     | 6.4912245E 01      | -1.2936608E 03 |
| 66 P93 | -2.8197345E 01     | 1.2011321E 02      | 9.1915860E 01  |
| 67 P94 | -3.6261668E 02     | 7.4317044E 02      | 3.8055376E 02  |
| 68 P95 | -6.4533183E 02     | 1.0244380E 03      | 3.7910616E 02  |
| 69 P96 | 3.6903849E 03      | -1.0715749E 04     | -7.0253641E 03 |
| 70 P97 | 3.4026887E 03      | 4.3304182E 02      | 3.8357309E 03  |
| 71 Q19 | 6.0498706E 01      | -7.7207076E 01     | -1.6708370E 01 |
| 72 Q20 | 5.8962642E 01      | -7.0663846E 01     | -1.1701204E 01 |
| 73 Q21 | 8.6689847E 00      | 8.5618480E 01      | 9.4287465E 01  |
| 74 Q22 | -9.5486928E 00     | 1.1955986E 02      | 1.1001117E 02  |
| 75 Q23 | 8.5232950E 00      | 6.1238471E 01      | 6.9762266E 01  |
| 76 Q24 | -6.8768951E 00     | 7.6560308E 01      | 6.9683414E 01  |
| 77 Q26 | 2.1092359E 00      | 9.6508223E 01      | 9.8617458E 01  |
| 78 Q28 | -1.8031966E 01     | 2.1750780E 02      | 1.9947584E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

PAGE 204

| PT     | 31.0<br>SYMMETRIC | 407.09<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 01   | -5.0649650E 00    | -7.9665509E 01     | -8.4730473E 01 |
| 2 02   | 3.1296043E 00     | -5.7994899E 01     | -5.4865295E 01 |
| 3 03   | -8.9978189E 01    | -7.2683263E 01     | -1.6246165E 02 |
| 4 04   | -1.4588904E 02    | -7.7886168E 01     | -2.2377521E 02 |
| 5 05   | -2.3242262E 02    | -1.3346776E 02     | -3.6584238E 02 |
| 6 06   | -2.5068440E 02    | -1.5442888E 02     | -4.0511378E 02 |
| 7 07   | -3.8941169E 02    | -1.7311479E 00     | -3.9114289E 02 |
| 8 08   | -3.7276616E 02    | -1.1544831E 01     | -3.8431099E 02 |
| 9 09   | 6.8726580E -06    | 4.1504359E 02      | 4.1504360E 02  |
| 10 010 | 1.2956407E 01     | -1.1906391E 01     | 1.0905158E 00  |
| 11 011 | 6.4536850E 01     | 5.5209443E 01      | 1.2474629E 02  |
| 12 012 | 9.4229246E 01     | 5.4700370E 01      | 1.4892962E 02  |
| 13 013 | 1.5641853E 02     | 9.6020169E 01      | 2.5293869E 02  |
| 14 014 | 1.8584812E 02     | 1.1455131E 02      | 3.0034943E 02  |
| 15 015 | 2.1305606E 02     | 1.2920626E 02      | 3.4226232E 02  |
| 16 016 | 3.4816408E 02     | 9.8153043E 00      | 3.5797939E 02  |
| 17 017 | 3.5079263E 02     | -6.7627921E 00     | 3.4402984E 02  |
| 18 018 | -3.1050655E -06   | -7.6764398E 00     | -7.6764429E 00 |
| 19 025 | -3.3045569E 01    | -4.6833497E 01     | -7.9879066E 01 |
| 20 030 | -1.4824601E 02    | -9.1351180E 01     | -2.3954719E 02 |
| 21 031 | 4.4491541E 01     | 5.3823454E 01      | 9.8315045E 01  |
| 22 032 | 2.7355705E 01     | 5.1147013E 01      | 7.8502719E 01  |
| 23 033 | 1.6289041E 01     | 3.4129132E -01     | 1.6630332E 01  |
| 24 034 | -1.9104441E 01    | -1.0086593E 01     | -2.9191034E 01 |
| 25 035 | 4.7280228E 01     | 3.3400918E 01      | 8.0681145E 01  |
| 26 036 | -8.1950011E 00    | 9.4231141E 00      | 1.2281129E 00  |
| 27 037 | -3.7981707E 01    | -4.9798575E 01     | -8.7780281E 01 |
| 28 038 | -4.0178907E 01    | -2.4465424E 01     | -6.4644330E 01 |
| 29 P40 | -1.0987634E 03    | -1.5349053E 03     | -2.6338687E 03 |
| 30 P41 | -8.8135439E 02    | -1.8364288E 03     | -2.7177832E 03 |
| 31 P42 | -2.3077833E 03    | -2.7966869E 03     | -5.1044702E 03 |
| 32 P43 | -4.8480107E 03    | -4.0494495E 03     | -8.8974601E 03 |
| 33 P44 | -4.8455869E 03    | -4.0474249E 03     | -8.8930117E 03 |
| 34 P45 | -9.4212906E 03    | -6.6750438E 03     | -1.6096334E 04 |
| 35 P46 | -1.4356775E 04    | -9.7154397E 03     | -2.4072215E 04 |
| 36 P47 | -2.1560891E 04    | -9.7474668E 03     | -3.1308357E 04 |
| 37 P48 | -2.8457066E 04    | -9.9610465E 03     | -3.8418112E 04 |
| 38 P49 | -2.8457066E 04    | 3.2065446E -05     | -2.8457066E 04 |
| 39 P50 | 1.0162939E 03     | 7.6624249E 02      | 1.7825364E 03  |
| 40 P51 | -2.8486936E 02    | -8.4475118E 02     | -1.1296205E 03 |
| 41 P52 | -2.1171684E 03    | -2.2121041E 03     | -4.3292726E 03 |
| 42 P53 | -6.1780022E 03    | -5.2658656E 03     | -1.1443868E 04 |
| 43 P54 | -5.2024598E 03    | -4.4343550E 03     | -9.6368147E 03 |
| 44 P55 | -8.6687360E 03    | -5.8158851E 03     | -1.4484621E 04 |
| 45 P56 | -1.2697212E 04    | -7.5002064E 03     | -2.0197419E 04 |
| 46 P57 | -1.2101713E 04    | -7.1484468E 03     | -1.9250160E 04 |
| 47 P58 | -1.5800198E 04    | -5.6400332E 03     | -2.1440231E 04 |
| 48 P59 | -1.9547310E 04    | -3.8249249E 03     | -2.3372235E 04 |
| 49 P60 | -1.9547310E 04    | 6.3652648E -06     | -1.9547310E 04 |
| 50 P62 | 3.2242403E 02     | 1.8423457E 02      | 5.0665860E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S1.0<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 3.2235941E 02     | 1.8419754E 02      | 5.0655705E 02  |
| 52 P64 | 5.4411449E 01     | 4.7016125E 00      | 5.9113061E 01  |
| 53 P67 | 4.7273870E 02     | 6.9831501E 01      | 5.4257020E 02  |
| 54 P68 | 4.7264400E 02     | 6.9817497E 01      | 5.4246150E 02  |
| 55 P69 | 1.3686958E 02     | 4.0716000E 01      | 1.7758558E 02  |
| 56 P72 | 8.7503403E 00     | -4.7186183E 02     | -4.6311144E 02 |
| 57 P73 | 8.7486119E 00     | -4.7176729E 02     | -4.6301869E 02 |
| 58 P74 | 2.4125216E 02     | 1.0306176E 02      | 3.4431393E 02  |
| 59 P77 | 1.8511757E 03     | 1.1160001E 03      | 2.9671758E 03  |
| 60 P79 | 1.4700816E 03     | 7.1728020E 02      | 2.1873618E 03  |
| 61 P80 | 1.4697870E 03     | 7.1713648E 02      | 2.1869234E 03  |
| 62 P81 | 1.4674313E 01     | -1.2041926E 02     | -1.0574494E 02 |
| 63 P82 | 2.1609488E 02     | 1.4019364E 02      | 3.5628851E 02  |
| 64 P83 | -1.8546834E 02    | 1.1802201E 03      | 9.9475176E 02  |
| 65 P84 | -1.1585731E 03    | 1.2547048E 03      | -1.0386828E 02 |
| 66 P93 | -2.81197345E 01   | -2.6024972E 02     | -2.8844707E 02 |
| 67 P94 | -3.6261668E 02    | -6.3244309E 02     | -9.9505976E 02 |
| 68 P95 | -6.4533183E 02    | -7.6980507E 02     | -1.4151369E 03 |
| 69 P96 | 3.6903849E 03     | 4.2232257E 03      | 7.9136106E 03  |
| 70 P97 | 3.4026887E 03     | 8.8624148E 00      | 3.4115511E 03  |
| 71 Q19 | 6.0498706E 01     | 2.3938109E 01      | 8.4436815E 01  |
| 72 Q20 | 5.8962642E 01     | 9.7608637E 00      | 6.8723505E 01  |
| 73 Q21 | 8.6689847E 00     | -2.0152159E 01     | -1.1483174E 01 |
| 74 Q22 | -9.5486928E 00    | -4.0427594E 01     | -4.9976287E 01 |
| 75 Q23 | 8.5232950E 00     | -9.2576944E 00     | -7.3439932E-01 |
| 76 Q24 | -6.8768951E 00    | -1.6740142E 01     | -2.3617037E 01 |
| 77 Q26 | 2.1092359E 00     | -4.8979445E 00     | -2.7887085E 00 |
| 78 Q28 | -1.8031966E 01    | -4.7665953E 01     | -6.4697919E 01 |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | S1.0<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -5.0649650E 00    | 9.8265976E 01      | 9.3201011E 01  |
| 2 Q2   | 3.1296043E 00     | 7.4126036E 01      | 7.7255640E 01  |
| 3 Q3   | -8.9978389E 01    | 9.0365014E 01      | 3.8662529E-01  |
| 4 Q4   | -1.4588904E 02    | 9.9666578E 01      | -4.6222463E 01 |
| 5 Q5   | -2.3242262E 02    | 1.7706911E 02      | -5.5353515E 01 |
| 6 Q6   | -2.5068490E 02    | 1.5401694E 02      | -9.6667964E 01 |
| 7 Q7   | -3.8941169E 02    | 6.5115934E 00      | -3.8290009E 02 |
| 8 Q8   | -3.7276616E 02    | 2.0547189E 01      | -3.5221897E 02 |
| 9 Q9   | 6.8726580E-06     | -4.9948434E 02     | -4.9948433E 02 |
| 10 Q10 | 1.2956907E 01     | 1.5949564E 01      | 2.8906471E 01  |
| 11 Q11 | 6.9536850E 01     | -6.4425308E 01     | 5.1115417E 00  |
| 12 Q12 | 9.4229246E 01     | -6.3323817E 01     | 3.0905430E 01  |
| 13 Q13 | 1.5691853E 02     | -1.1284214E 02     | 4.4076390E 01  |
| 14 Q14 | 1.8584812E 02     | -1.2886747E 02     | 5.6980658E 01  |
| 15 Q15 | 2.1305606E 02     | -1.4371336E 02     | 6.9342701E 01  |
| 16 Q16 | 3.4816408E 02     | -3.5712564E 01     | 3.1245152E 02  |
| 17 Q17 | 3.5079263E 02     | -1.3754571E 01     | 3.3703806E 02  |
| 18 Q18 | -3.1050655E-06    | 9.1661309E 00      | 9.1661278E 00  |
| 19 Q25 | -3.3045569E 01    | 5.8781638E 01      | 2.5736068E 01  |
| 20 Q30 | -1.4824601E 02    | 1.0968952E 02      | -3.8556496E 01 |
| 21 Q31 | 4.4491591E 01     | -6.6824607E 01     | -2.2333015E 01 |
| 22 Q32 | 2.7355705E 01     | -6.4089835E 01     | -3.6734129E 01 |
| 23 Q33 | 1.6289041E 01     | -1.8396554E 00     | 1.4449386E 01  |
| 24 Q34 | -1.9104441E 01    | 1.0747275E 01      | -8.3571661E 00 |
| 25 Q35 | 4.7280228E 01     | -4.1461310E 01     | 5.8189168E 00  |
| 26 Q36 | -8.1950011E 00    | -1.1568982E 01     | -1.9763983E 01 |
| 27 Q37 | -3.7981707E 01    | 6.1828212E 01      | 2.3846505E 01  |
| 28 Q38 | -4.0178907E 01    | 3.2571768E 01      | -7.6071391E 00 |
| 29 P40 | -1.0989634E 03    | 1.8445067E 03      | 7.4554325E 02  |
| 30 P41 | -8.8135439E 02    | 2.2342573E 03      | 1.3529029E 03  |
| 31 P42 | -2.3077833E 03    | 3.3977543E 03      | 1.0899710E 03  |
| 32 P43 | -4.8480107E 03    | 4.9712773E 03      | 1.2326660E 02  |
| 33 P44 | -4.8455869E 03    | 4.9687917E 03      | 1.2320477E 02  |
| 34 P45 | -9.4212906E 03    | 8.4547509E 03      | -9.6653967E 02 |
| 35 P46 | -1.4356775E 04    | 1.1487037E 04      | -2.8697386E 03 |
| 36 P47 | -2.1560891E 04    | 1.1607502E 04      | -9.9533888E 03 |
| 37 P48 | -2.8457066E 04    | 1.1987624E 04      | -1.6469441E 04 |
| 38 P49 | -2.8457066E 04    | -3.2555639E-05     | -2.8457066E 04 |
| 39 P50 | 1.0162939E 03     | -9.0966311E 02     | 1.0663075E 02  |
| 40 P51 | -2.8486936E 02    | 1.0398031E 03      | 7.5493371E 02  |
| 41 P52 | -2.1171684E 03    | 2.6895865E 03      | 5.7241809E 02  |
| 42 P53 | -6.1780022E 03    | 6.3583623E 03      | 1.8036011E 02  |
| 43 P54 | -5.2024598E 03    | 5.3543399E 03      | 1.5188006E 02  |
| 44 P55 | -8.6687360E 03    | 6.8905140E 03      | -1.7782220E 03 |
| 45 P56 | -1.2697212E 04    | 8.7334307E 03      | -3.9637816E 03 |
| 46 P57 | -1.2101713E 04    | 8.3238330E 03      | -3.7778804E 03 |
| 47 P58 | -1.5800198E 04    | 6.9552598E 03      | -8.8449378E 03 |
| 48 P59 | -1.9547310E 04    | 5.1804630E 03      | -1.4366847E 04 |
| 49 P60 | -1.9547310E 04    | -7.4040030E-06     | -1.9547310E 04 |
| 50 P62 | 3.2242403E 02     | -2.1998715E 02     | 1.0243688E 02  |

## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | 51.0<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 3.2235941E 02     | -2.1994306E 02     | 1.0241636E 02  |
| 52 P64 | 5.4411449E 01     | -3.8459961E 00     | 5.0565453E 01  |
| 53 P67 | 4.7273870E 02     | -7.9616043E 01     | 3.9312266E 02  |
| 54 P68 | 4.7264400E 02     | -7.9600077E 01     | 3.9304393E 02  |
| 55 P69 | 1.3686958E 02     | -4.9021001E 01     | 8.7848580E 01  |
| 56 P72 | 8.7503903E 00     | 5.5512822E 02      | 5.6387861E 02  |
| 57 P73 | 8.7486115E 00     | 5.5501700E 02      | 5.6376562E 02  |
| 58 P74 | 2.4125216E 02     | -1.2850037E 02     | 1.1275180E 02  |
| 59 P77 | 1.8511757E 03     | -1.3894314E 03     | 4.6174434E 02  |
| 60 P79 | 1.4700816E 03     | -9.1266559E 02     | 5.5741599E 02  |
| 61 P80 | 1.4697870E 03     | -9.1248270E 02     | 5.5730429E 02  |
| 62 P81 | 1.4674313E 01     | 1.3863659E 02      | 1.5331090E 02  |
| 63 P82 | 2.1609488E 02     | -2.0138631E 02     | 1.4708561E 01  |
| 64 P83 | -1.8546834E 02    | -1.1343993E 03     | -1.3198677E 03 |
| 65 P84 | -1.3585731E 03    | -1.2087861E 03     | -2.5673591E 03 |
| 66 P93 | -2.8197345E 01    | 3.1951507E 02      | 2.9131773E 02  |
| 67 P94 | -3.6261668E 02    | 7.7198526E 02      | 4.0936857E 02  |
| 68 P95 | -6.4533183E 02    | 9.3237008E 02      | 2.8703825E 02  |
| 69 P96 | 3.6903849E 03     | -5.1483127E 03     | -1.4579278E 03 |
| 70 P97 | 3.4026887E 03     | -2.2233076E 02     | 3.1803580E 03  |
| 71 Q19 | 6.0498706E 01     | -2.6604094E 01     | 3.3894612E 01  |
| 72 Q20 | 5.8962642E 01     | -9.1983365E 00     | 4.9764306E 01  |
| 73 Q21 | 8.6689847E 00     | 2.6769897E 01      | 3.5438881E 01  |
| 74 Q22 | -9.5486928E 00    | 5.1418458E 01      | 4.1869765E 01  |
| 75 Q23 | 8.5232950E 00     | 1.3844959E 01      | 2.2368253E 01  |
| 76 Q24 | -6.8768951E 00    | 2.2581515E 01      | 1.5704620E 01  |
| 77 Q26 | 2.1092359E 00     | 7.9902694E 00      | 1.0099505E 01  |
| 78 Q28 | -1.8031966E 01    | 5.4495207E 01      | 3.6463242E 01  |

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|    | PT  | S1.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|----|-----|-------------------|-------------------|----------------|
| 1  | Q1  | -5.0649650E 00    | -2.5441581E 01    | -3.0506546E 01 |
| 2  | Q2  | 3.1296043E 00     | -4.5616471E 01    | -4.2486866E 01 |
| 3  | Q3  | -8.9978389E 01    | -5.6575853E 01    | -1.4655424E 02 |
| 4  | Q4  | -1.4588904E 02    | -7.0773886E 01    | -2.1666293E 02 |
| 5  | Q5  | -2.3242262E 02    | -5.7859182E 01    | -2.9028180E 02 |
| 6  | Q6  | -2.5068490E 02    | -4.2855625E 01    | -2.9354053E 02 |
| 7  | Q7  | -3.8941169E 02    | 8.7982782E 01     | -3.0142891E 02 |
| 8  | Q8  | -3.7276616E 02    | 9.4307739E 01     | -2.7845842E 02 |
| 9  | Q9  | 6.8726580E-06     | 1.0309002E 02     | 1.0309003E 02  |
| 10 | Q10 | 1.2956907E 01     | 8.5498621E 00     | 2.1506769E 01  |
| 11 | Q11 | 6.9536850E 01     | 1.6179562E 01     | 8.5716411E 01  |
| 12 | Q12 | 9.4229246E 01     | 3.6031333E 01     | 1.3026058E 02  |
| 13 | Q13 | 1.5691853E 02     | 4.1714892E 01     | 1.9863342E 02  |
| 14 | Q14 | 1.8584812E 02     | 3.3949550E 01     | 2.1979767E 02  |
| 15 | Q15 | 2.1305606E 02     | 6.3664874E 01     | 2.7672093E 02  |
| 16 | Q16 | 3.4816408E 02     | 2.0596797E 01     | 3.6876088E 02  |
| 17 | Q17 | 3.5079263E 02     | 3.2522914E 01     | 3.8331554E 02  |
| 18 | Q18 | -3.1050655E-06    | -4.5847157E 00    | -4.5847188E 00 |
| 19 | Q25 | -3.3045569E 01    | 1.0923471E 01     | -2.2122098E 01 |
| 20 | Q30 | -1.4824601E 02    | -1.6744550E 01    | -1.6499056E 02 |
| 21 | Q31 | 4.4491591E 01     | -1.4157938E 01    | 3.0333653E 01  |
| 22 | Q32 | 2.7355705E 01     | -2.4662849E 01    | 2.6928568E 00  |
| 23 | Q33 | 1.6289041E 01     | -4.0016121E 00    | 1.2287429E 01  |
| 24 | Q34 | -1.9104441E 01    | -1.5758514E 01    | -3.4862956E 01 |
| 25 | Q35 | 4.7280228E 01     | -9.8931588E 00    | 3.7387069E 01  |
| 26 | Q36 | -8.1950011E 00    | -2.3276033E 01    | -3.1471034E 01 |
| 27 | Q37 | -3.7981707E 01    | -7.1728755E 00    | -4.5154582E 01 |
| 28 | Q38 | -4.0178907E 01    | 9.0512993E 00     | -3.1127608E 01 |
| 29 | P40 | -1.0989634E 03    | -8.6938715E 01    | -1.1859021E 03 |
| 30 | P41 | -8.8135439E 02    | -9.4034400E 02    | -1.8216984E 03 |
| 31 | P42 | -2.3077833E 03    | -2.1069266E 03    | -4.4147099E 03 |
| 32 | P43 | -4.8480107E 03    | -3.8656527E 03    | -8.7136633E 03 |
| 33 | P44 | -4.8455869E 03    | -3.8637200E 03    | -8.7093068E 03 |
| 34 | P45 | -9.4212906E 03    | -5.0027936E 03    | -1.4424084E 04 |
| 35 | P46 | -1.4356775E 04    | -5.8465353E 03    | -2.0203310E 04 |
| 36 | P47 | -2.1560891E 04    | -4.2188538E 03    | -2.5779744E 04 |
| 37 | P48 | -2.8457066E 04    | -2.4741608E 03    | -3.0931226E 04 |
| 38 | P49 | -2.8457066E 04    | 1.9226402E-05     | -2.8457066E 04 |
| 39 | P50 | 1.0162939E 03     | -3.5901390E 02    | 6.5727997E 02  |
| 40 | P51 | -2.8486936E 02    | -4.6011946E 02    | -7.4498881E 02 |
| 41 | P52 | -2.1171684E 03    | -9.5935748E 02    | -3.0765259E 03 |
| 42 | P53 | -6.1780022E 03    | -1.6175810E 03    | -7.7955832E 03 |
| 43 | P54 | -5.2024598E 03    | -1.3621556E 03    | -6.5646154E 03 |
| 44 | P55 | -8.6687360E 03    | -2.9005380E 03    | -1.1569274E 04 |
| 45 | P56 | -1.2697212E 04    | -5.0528108E 03    | -1.7750023E 04 |
| 46 | P57 | -1.2101713E 04    | -4.8158342E 03    | -1.6917548E 04 |
| 47 | P58 | -1.5800198E 04    | -4.8871008E 03    | -2.0687298E 04 |
| 48 | P59 | -1.9547310E 04    | -5.1790004E 03    | -2.4726310E 04 |
| 49 | P60 | -1.9547310E 04    | -5.3066286E-06    | -1.9547310E 04 |
| 50 | P62 | 3.2242403E 02     | 1.1003317E 02     | 4.3245720E 02  |



## INTERNAL LOADS IN REDUNDANT STRUCTURE

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| PT     | 51.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|-------------------|----------------|
| 51 P63 | 3.2235941E 02     | 1.1001111E 02     | 4.3237052E 02  |
| 52 P64 | 5.4411449E 01     | 3.6712172E 01     | 9.1123620E 01  |
| 53 P67 | 4.7273870E 02     | 8.7674375E 01     | 5.6041307E 02  |
| 54 P68 | 4.7264400E 02     | 8.7656806E 01     | 5.6030080E 02  |
| 55 P69 | 1.3686958E 02     | 4.6289421E 01     | 1.8315900E 02  |
| 56 P72 | 8.7503903E 00     | -1.8861680E 02    | -1.7986642E 02 |
| 57 P73 | 8.7486115E 00     | -1.8857900E 02    | -1.7983039E 02 |
| 58 P74 | 2.4125216E 02     | 6.0193356E 01     | 3.0144552E 02  |
| 59 P77 | 1.8511757E 03     | 1.1603541E 03     | 3.0115298E 03  |
| 60 P79 | 1.4700816E 03     | 5.9432774E 02     | 2.0644093E 03  |
| 61 P80 | 1.4697870E 03     | 5.9420862E 02     | 2.0639956E 03  |
| 62 P81 | 1.4674313E 01     | -7.9592395E 01    | -6.4918083E 01 |
| 63 P82 | 2.1609488E 02     | 3.7902612E 01     | 2.5399748E 02  |
| 64 P83 | -1.8546834E 02    | 8.7875068E 02     | 6.9328235E 02  |
| 65 P84 | -1.3585731E 03    | 1.0499696E 03     | -3.0860351E 02 |
| 66 P93 | -2.8197345E 01    | -2.2270021E 02    | -2.5089755E 02 |
| 67 P94 | -3.6261668E 02    | -3.5753898E 02    | -7.2015565E 02 |
| 68 P95 | -6.4533183E 02    | -3.8125777E 02    | -1.0265896E 03 |
| 69 P96 | 3.6903849E 03     | 8.6944716E 01     | 3.7773296E 03  |
| 70 P97 | 3.4026887E 03     | 3.5994406E 02     | 3.7626328E 03  |
| 71 Q19 | 6.0498706E 01     | -8.2446572E 00    | 5.2254049E 01  |
| 72 Q20 | 5.8962642E 01     | -2.0376373E 01    | 3.8586269E 01  |
| 73 Q21 | 8.6689847E 00     | 1.1449884E 01     | 2.0118869E 01  |
| 74 Q22 | -9.5486928E 00    | 4.1044679E 00     | -5.4442249E 00 |
| 75 Q23 | 8.5232950E 00     | 1.2679431E 01     | 2.1202725E 01  |
| 76 Q24 | -6.8768951E 00    | 1.1387411E 01     | 4.5105164E 00  |
| 77 Q26 | 2.1092359E 00     | 3.1692695E 01     | 3.3801931E 01  |
| 78 Q28 | -1.8031966E 01    | 4.0529625E 01     | 2.2497659E 01  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S3.0<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -1.5193098E 03    | -3.3120691E 03     | -4.8313789E 03 |
| 2 Q2   | -1.8498813E 03    | -5.0285414E 02     | -2.3527355E 03 |
| 3 Q3   | -3.7457205E 03    | -4.1093040E 02     | -4.1566509E 03 |
| 4 Q4   | -4.8539264E 03    | -2.8114889E 01     | -4.8820413E 03 |
| 5 Q5   | -5.1747904E 03    | -1.9115867E 03     | -7.0863770E 03 |
| 6 Q6   | -4.6276692E 03    | -1.6217939E 03     | -6.2494630E 03 |
| 7 Q7   | -5.2270961E 03    | -1.4771147E 03     | -6.7042108E 03 |
| 8 Q8   | -4.2148021E 03    | -1.5335684E 03     | -5.7483705E 03 |
| 9 Q9   | 1.1894247E-04     | 5.4166592E 03      | 5.4166592E 03  |
| 10 Q10 | 9.1792786E 02     | -1.4630745E 03     | -5.4514666E 02 |
| 11 Q11 | 2.4198663E 03     | 1.5571702E 03      | 3.9770445E 03  |
| 12 Q12 | 2.9732524E 03     | 3.4743143E 02      | 3.3206838E 03  |
| 13 Q13 | 3.8050754E 03     | 1.3796142E 03      | 5.1846896E 03  |
| 14 Q14 | 2.4990958E 03     | 1.3573110E 03      | 3.8564068E 03  |
| 15 Q15 | 3.1706268E 03     | 8.1718949E 02      | 3.9878163E 03  |
| 16 Q16 | 6.0561669E 03     | -5.5051709E 02     | 5.5056498E 03  |
| 17 Q17 | 4.6541041E 03     | -8.1211423E 02     | 3.8419899E 03  |
| 18 Q18 | -6.6474178E-06    | -4.1355867E 00     | -4.1355933E 00 |
| 19 Q25 | -3.3934190E 02    | -2.0185134E 03     | -2.3578553E 03 |
| 20 Q30 | -3.3257460E 03    | -2.2089568E 03     | -5.5347028E 03 |
| 21 Q31 | 8.5291462E 02     | 4.3752738E 03      | 5.2281885E 03  |
| 22 Q32 | -2.4360394E 02    | 5.0075667E 03      | 4.7639627E 03  |
| 23 Q33 | 4.7848200E 02     | 3.7180792E 02      | 8.5028992E 02  |
| 24 Q34 | -1.3104641E 03    | 5.9301525E 02      | -7.1744884E 02 |
| 25 Q35 | 6.2240345E 02     | 1.4822757E 03      | 2.1046791E 03  |
| 26 Q36 | -8.1896864E 02    | 1.2077469E 03      | 3.8877822E 02  |
| 27 Q37 | -6.1068661E 02    | -9.4578089E 02     | -1.5564675E 03 |
| 28 Q38 | -4.6275741E 02    | -7.9469135E 02     | -1.2574487E 03 |
| 29 P40 | -8.0621734E 03    | -1.6651671E 04     | -2.4713844E 04 |
| 30 P41 | -8.3468912E 03    | -4.9872969E 03     | -1.3334188E 04 |
| 31 P42 | -1.1768968E 04    | -1.5589774E 03     | -1.3327946E 04 |
| 32 P43 | -1.7540918E 04    | 1.0002914E 03      | -1.6540626E 04 |
| 33 P44 | -1.7814143E 04    | 1.0158726E 03      | -1.6798271E 04 |
| 34 P45 | -2.0256855E 04    | -2.3545403E 03     | -2.2611395E 04 |
| 35 P46 | -2.1871284E 04    | -4.0277214E 03     | -2.5899006E 04 |
| 36 P47 | -2.2651533E 04    | -4.7455153E 03     | -2.7397048E 04 |
| 37 P48 | -2.8397892E 04    | -6.8272601E 03     | -3.5225152E 04 |
| 38 P49 | -2.5658682E 04    | 1.1043513E-05      | -2.5658682E 04 |
| 39 P50 | 3.0022767E 03     | 1.3258982E 04      | 1.6261259E 04  |
| 40 P51 | -3.7808805E 03    | -2.3168248E 03     | -6.0977053E 03 |
| 41 P52 | -9.7350730E 03    | -5.3708774E 03     | -1.5105950E 04 |
| 42 P53 | -1.9804498E 04    | -1.3887579E 04     | -3.3692077E 04 |
| 43 P54 | -1.8659902E 04    | -1.3084949E 04     | -3.1744852E 04 |
| 44 P55 | -1.8980583E 04    | -5.8537735E 03     | -2.4834356E 04 |
| 45 P56 | -2.3159965E 04    | -2.4237982E 03     | -2.5583763E 04 |
| 46 P57 | -2.2073764E 04    | -2.3101218E 03     | -2.4383885E 04 |
| 47 P58 | -2.2037543E 04    | 9.6862619E 02      | -2.1068917E 04 |
| 48 P59 | -2.2568314E 04    | 3.4561646E 03      | -1.9112149E 04 |
| 49 P60 | -2.2321074E 04    | 1.5006377E-05      | -2.2321074E 04 |
| 50 P62 | 1.0621718E 03     | 1.9848475E 02      | 1.2606566E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S3.0<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 1.0619590E 03     | 1.9844504E 02      | 1.2604041E 03  |
| 52 P64 | 1.1658520E 02     | -7.9842802E 01     | 3.6742399E 01  |
| 53 P67 | 8.5030839E 02     | -1.0977144E 02     | 7.4053697E 02  |
| 54 P68 | 8.5013803E 02     | -1.0974946E 02     | 7.4038858E 02  |
| 55 P69 | 2.2234281E 02     | -2.8701252E 01     | 1.9364156E 02  |
| 56 P72 | -1.7965139E 02    | -4.7830688E 02     | -6.5795828E 02 |
| 57 P73 | -1.7961542E 02    | -4.7821111E 02     | -6.5782652E 02 |
| 58 P74 | 3.7950022E 02     | 6.4622294E 01      | 4.4412251E 02  |
| 59 P77 | 3.7730536E 03     | -3.9574104E 02     | 3.3773126E 03  |
| 60 P79 | 3.5648744E 03     | 6.4267163E 01      | 3.6291415E 03  |
| 61 P80 | 3.5641599E 03     | 6.4254277E 01      | 3.6284142E 03  |
| 62 P81 | -6.0406273E 01    | -5.8798329E 01     | -1.1920460E 02 |
| 63 P82 | 4.4098905E 02     | 2.1600464E 02      | 6.5699369E 02  |
| 64 P83 | -5.9113560E 02    | 3.0393402E 02      | -2.8720159E 02 |
| 65 P84 | -1.2465348E 03    | 3.2538471E 01      | -1.2139963E 03 |
| 66 P93 | -4.3923928E 03    | -2.5610262E 02     | -4.6484953E 03 |
| 67 P94 | -1.0245029E 04    | -4.5622959E 03     | -1.4807325E 04 |
| 68 P95 | -1.2860187E 04    | -6.4503073E 03     | -1.9310495E 04 |
| 69 P96 | 4.9607722E 03     | 6.3952236E 03      | 1.1355996E 04  |
| 70 P97 | 7.0169286E 03     | -1.1849407E 03     | 5.8319879E 03  |
| 71 Q19 | 1.7730162E 03     | 1.9416400E 03      | 3.7146562E 03  |
| 72 Q20 | 1.0078873E 03     | 1.8970284E 03      | 2.9049157E 03  |
| 73 Q21 | 6.6754835E 02     | -1.7758831E 03     | -1.1083348E 03 |
| 74 Q22 | -1.3796003E 02    | -2.3566760E 03     | -2.4946360E 03 |
| 75 Q23 | 4.8579273E 02     | -1.0466926E 03     | -5.6089982E 02 |
| 76 Q24 | 1.6406280E 02     | -1.2701349E 03     | -1.1060721E 03 |
| 77 Q26 | 8.4835175E 02     | -1.4228002E 03     | -5.7444842E 02 |
| 78 Q28 | 1.1899587E 03     | -3.0652328E 03     | -1.8752740E 03 |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | 53.0<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -1.5193098E 03    | 4.5550550E 03      | 3.0357452E 03  |
| 2 Q2   | -1.8498813E 03    | 1.0632209E 03      | -7.8666039E 02 |
| 3 Q3   | -3.7457205E 03    | 1.0124299E 03      | -2.7332906E 03 |
| 4 Q4   | -4.8539264E 03    | 5.8601795E 02      | -4.2679085E 03 |
| 5 Q5   | -5.1747904E 03    | 2.9684564E 03      | -2.2063339E 03 |
| 6 Q6   | -4.6276692E 03    | 2.5112805E 03      | -2.1163886E 03 |
| 7 Q7   | -5.2270961E 03    | 2.3783830E 03      | -2.8487132E 03 |
| 8 Q8   | -4.2148021E 03    | 2.3561234E 03      | -1.8586788E 03 |
| 9 Q9   | 1.1894247E-04     | -9.3726118E 03     | -9.3726118E 03 |
| 10 Q10 | 9.1792786E 02     | 1.7285549E 03      | 2.6464828E 03  |
| 11 Q11 | 2.4198663E 03     | -2.2959960E 03     | 1.2387030E 02  |
| 12 Q12 | 2.9732524E 03     | -8.2870946E 02     | 2.1445430E 03  |
| 13 Q13 | 3.8050754E 03     | -2.1987973E 03     | 1.6062781E 03  |
| 14 Q14 | 2.4990958E 03     | -1.9902911E 03     | 5.0880471E 02  |
| 15 Q15 | 3.1706268E 03     | -1.3964080E 03     | 1.7742188E 03  |
| 16 Q16 | 6.0561669E 03     | -2.1620456E 02     | 5.8399624E 03  |
| 17 Q17 | 4.6541041E 03     | 3.3850265E 02      | 4.9926067E 03  |
| 18 Q18 | -6.6474178E-06    | 8.1002703E 00      | 8.1002637E 00  |
| 19 Q25 | -3.3934190E 02    | 2.5385840E 03      | 2.1992421E 03  |
| 20 Q30 | -3.3257460E 03    | 3.1838465E 03      | -1.4189951E 02 |
| 21 Q31 | 8.5291462E 02     | -5.5474036E 03     | -4.6944891E 03 |
| 22 Q32 | -2.4360394E 02    | -6.1896641E 03     | -6.4332681E 03 |
| 23 Q33 | 4.7848200E 02     | -4.3593706E 02     | 4.2544933E 01  |
| 24 Q34 | -1.3104641E 03    | -5.2218182E 02     | -1.8326459E 03 |
| 25 Q35 | 6.2240345E 02     | -1.8820255E 03     | -1.2596220E 03 |
| 26 Q36 | -8.1896864E 02    | -1.3832173E 03     | -2.2021860E 03 |
| 27 Q37 | -6.1068661E 02    | 1.2597603E 03      | 6.4907373E 02  |
| 28 Q38 | -4.6275741E 02    | 1.0212990E 03      | 5.5854158E 02  |
| 29 P40 | -8.0621734E 03    | 2.2120702E 04      | 1.4058529E 04  |
| 30 P41 | -8.3468912E 03    | 7.8476681E 03      | -4.9922314E 02 |
| 31 P42 | -1.1768968E 04    | 3.8824083E 03      | -7.8865601E 03 |
| 32 P43 | -1.7540918E 04    | 1.3057995E 03      | -1.6235118E 04 |
| 33 P44 | -1.7814143E 04    | 1.3261390E 03      | -1.6488004E 04 |
| 34 P45 | -2.0256855E 04    | 5.6165830E 03      | -1.4640272E 04 |
| 35 P46 | -2.1871284E 04    | 7.7474763E 03      | -1.4123808E 04 |
| 36 P47 | -2.2651533E 04    | 8.6116629E 03      | -1.4039870E 04 |
| 37 P48 | -2.8397892E 04    | 1.1813419E 04      | -1.6584473E 04 |
| 38 P49 | -2.5658682E 04    | -1.1620211E-05     | -2.5658682E 04 |
| 39 P50 | 3.0022767E 03     | -1.6723132E 04     | -1.3720856E 04 |
| 40 P51 | -3.7808805E 03    | 3.6597497E 03      | -1.2113086E 02 |
| 41 P52 | -9.7350730E 03    | 8.1406331E 03      | -1.5944398E 03 |
| 42 P53 | -1.9804498E 04    | 1.9938421E 04      | 1.3392261E 02  |
| 43 P54 | -1.8659902E 04    | 1.8786084E 04      | 1.2618188E 02  |
| 44 P55 | -1.4980583E 04    | 9.7909447E 03      | -9.1896380E 03 |
| 45 P56 | -2.3159965E 04    | 6.0287951E 03      | -1.7131170E 04 |
| 46 P57 | -2.2073764E 04    | 5.7460443E 03      | -1.6327719E 04 |
| 47 P58 | -2.2037543E 04    | 1.8289369E 03      | -2.0208606E 04 |
| 48 P59 | -2.2568314E 04    | -1.1282955E 03     | -2.3696609E 04 |
| 49 P60 | -2.2321074E 04    | -1.6238353E-05     | -2.2321074E 04 |
| 50 P62 | 1.0621718E 03     | -3.8876711E 02     | 6.7340474E 02  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S3.0<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 1.0619590E 03     | -3.8868926E 02     | 6.7326975E 02  |
| 52 P64 | 1.1658520E 02     | 8.3960884E 01      | 2.0054608E 02  |
| 53 P67 | 8.5030839E 02     | 7.0857104E 01      | 9.2116550E 02  |
| 54 P68 | 8.5013803E 02     | 7.0842934E 01      | 9.2098097E 02  |
| 55 P69 | 2.2234281E 02     | 1.2005733E 01      | 2.3434854E 02  |
| 56 P72 | -1.7965139E 02    | 6.7073250E 02      | 4.9108110E 02  |
| 57 P73 | -1.7961542E 02    | 6.7059817E 02      | 4.9098275E 02  |
| 58 P74 | 3.7950022E 02     | -1.2197190E 02     | 2.5752831E 02  |
| 59 P77 | 3.7730536E 03     | -3.5666411E 01     | 3.7373872E 03  |
| 60 P79 | 3.5648744E 03     | -5.4547663E 02     | 3.0193977E 03  |
| 61 P80 | 3.5641599E 03     | -5.4536729E 02     | 3.0187926E 03  |
| 62 P81 | -6.0406273E 01    | 9.4896653E 01      | 3.4490380E 01  |
| 63 P82 | 4.4098905E 02     | -3.3272498E 02     | 1.0826407E 02  |
| 64 P83 | -5.9113560E 02    | -2.0669116E 02     | -7.9782676E 02 |
| 65 P84 | -1.2465348E 03    | 6.4912245E 01      | -1.1816226E 03 |
| 66 P93 | -4.3923928E 03    | 1.2520961E 03      | -3.1402967E 03 |
| 67 P94 | -1.0245029E 04    | 7.5173919E 03      | -2.7276375E 03 |
| 68 P95 | -1.2860187E 04    | 1.0071147E 04      | -2.7890401E 03 |
| 69 P96 | 4.9607722E 03     | -1.0715749E 04     | -5.7549767E 03 |
| 70 P97 | 7.0169286E 03     | 4.3304182E 02      | 7.4499704E 03  |
| 71 Q19 | 1.7730162E 03     | -2.5735691E 03     | -8.0055292E 02 |
| 72 Q20 | 1.0078873E 03     | -2.3554614E 03     | -1.3475741E 03 |
| 73 Q21 | 6.6754835E 02     | 2.1404620E 03      | 2.8080103E 03  |
| 74 Q22 | -1.3796003E 02    | 2.9889966E 03      | 2.8510366E 03  |
| 75 Q23 | 4.8579273E 02     | 1.2247794E 03      | 1.7105721E 03  |
| 76 Q24 | 1.6406280E 02     | 1.5312062E 03      | 1.6952690E 03  |
| 77 Q26 | 8.4835175E 02     | 1.6084707E 03      | 2.4568224E 03  |
| 78 Q28 | 1.1899587E 03     | 3.6251301E 03      | 4.8150887E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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|    | PT  | S3.0<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|----|-----|-------------------|--------------------|----------------|
| 1  | Q1  | -1.5193098E 03    | -2.5031859E 03     | -4.0224956E 03 |
| 2  | Q2  | -1.8498813E 03    | -1.4323986E 03     | -3.2822799E 03 |
| 3  | Q3  | -3.7457205E 03    | -1.4703533E 03     | -5.2160738E 03 |
| 4  | Q4  | -4.8539264E 03    | -1.3354284E 03     | -6.1893548E 03 |
| 5  | Q5  | -5.1747904E 03    | -1.7149262E 03     | -6.8897166E 03 |
| 6  | Q6  | -4.6276692E 03    | -1.7653074E 03     | -6.3929765E 03 |
| 7  | Q7  | -5.2270961E 03    | -1.7564388E 01     | -5.2446605E 03 |
| 8  | Q8  | -4.2148021E 03    | -9.7107031E 01     | -4.3119091E 03 |
| 9  | Q9  | 1.1894247E-04     | 4.8487053E 03      | 4.8487054E 03  |
| 10 | Q10 | 9.1792786E 02     | -3.7183302E 02     | 5.4609484E 02  |
| 11 | Q11 | 2.4198663E 03     | 1.3165188E 03      | 3.7363851E 03  |
| 12 | Q12 | 2.9732524E 03     | 1.0272346E 03      | 4.0004870E 03  |
| 13 | Q13 | 3.8050754E 03     | 1.5629779E 03      | 5.3680533E 03  |
| 14 | Q14 | 2.4990958E 03     | 1.2087339E 03      | 3.7078297E 03  |
| 15 | Q15 | 3.1706268E 03     | 1.2392043E 03      | 4.4098312E 03  |
| 16 | Q16 | 6.0561669E 03     | 8.8503616E 01      | 6.1446705E 03  |
| 17 | Q17 | 4.6541041E 03     | -4.3509775E 01     | 4.6105943E 03  |
| 18 | Q18 | -6.6474178E-06    | -7.8014122E 00     | -7.8014188E 00 |
| 19 | Q25 | -3.3934190E 02    | -7.8055830E 02     | -1.1199002E 03 |
| 20 | Q30 | -3.3257460E 03    | -1.5225197E 03     | -4.8482656E 03 |
| 21 | Q31 | 8.5291462E 02     | 1.6819129E 03      | 2.5348975E 03  |
| 22 | Q32 | -2.4360394E 02    | 1.5983441E 03      | 1.3547402E 03  |
| 23 | Q33 | 4.7848200E 02     | 1.0665354E 01      | 4.8914735E 02  |
| 24 | Q34 | -1.3104641E 03    | -3.1520603E 02     | -1.6256701E 03 |
| 25 | Q35 | 6.2240345E 02     | 5.5668198E 02      | 1.1790854E 03  |
| 26 | Q36 | -8.1896864E 02    | 1.5705190E 02      | -6.6191674E 02 |
| 27 | Q37 | -6.1068661E 02    | -5.5331749E 02     | -1.1640041E 03 |
| 28 | Q38 | -4.6275741E 02    | -2.7183803E 02     | -7.3459544E 02 |
| 29 | P40 | -8.0621734E 03    | -9.1738681E 03     | -1.7236041E 04 |
| 30 | P41 | -8.3468912E 04    | -6.0354782E 03     | -1.4382369E 04 |
| 31 | P42 | -1.1768968E 04    | -5.6179007E 03     | -1.7386869E 04 |
| 32 | P43 | -1.7540918E 04    | -6.1278700E 03     | -2.3668787E 04 |
| 33 | P44 | -1.7814143E 04    | -6.2233205E 03     | -2.4037463E 04 |
| 34 | P45 | -2.0256855E 04    | -6.9289624E 03     | -2.7185817E 04 |
| 35 | P46 | -2.1871284E 04    | -7.7311583E 03     | -2.9602442E 04 |
| 36 | P47 | -2.2651533E 04    | -5.9648649E 03     | -2.8616398E 04 |
| 37 | P48 | -2.8397892E 04    | -6.1114008E 03     | -3.4509293E 04 |
| 38 | P49 | -2.5658687E 04    | 1.7775480E-05      | -2.5658682E 04 |
| 39 | P50 | 3.0022767E 03     | 4.5220796E 03      | 7.5243563E 03  |
| 40 | P51 | -3.7808805E 03    | -2.9307628E 03     | -6.7116433E 03 |
| 41 | P52 | -9.7350730E 03    | -5.4445412E 03     | -1.5179614E 04 |
| 42 | P53 | -1.9804498E 04    | -1.1109028E 04     | -3.0913526E 04 |
| 43 | P54 | -1.8659902E 04    | -1.0466784E 04     | -2.9126886E 04 |
| 44 | P55 | -1.8980583E 04    | -7.7346618E 03     | -2.6715244E 04 |
| 45 | P56 | -2.3159965E 04    | -7.6943866E 03     | -3.0854352E 04 |
| 46 | P57 | -2.2073764E 04    | -7.3335200E 03     | -2.9407284E 04 |
| 47 | P58 | -2.2037543E 04    | -4.1087641E 03     | -2.6146307E 04 |
| 48 | P59 | -2.2568314E 04    | -2.1611273E 03     | -2.4729511E 04 |
| 49 | P60 | -2.2321074E 04    | 3.5571646E-06      | -2.2321074E 04 |
| 50 | P62 | 1.0621718E 03     | 3.7442359E 02      | 1.4365954E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S3.0<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 1.0619590E 03     | 3.7434855E 02      | 1.4363075E 03  |
| 52 P64 | 1.1658520E 02     | 4.7016125E 00      | 1.2128681E 02  |
| 53 P67 | 8.5030839E 02     | 9.7279470E 01      | 9.4758786E 02  |
| 54 P68 | 8.5013803E 02     | 9.7259961E 01      | 9.4739799E 02  |
| 55 P69 | 2.2234281E 02     | 4.0716000E 01      | 2.6305881E 02  |
| 56 P72 | -1.7965139E 02    | -4.4807527E 02     | -6.2772667E 02 |
| 57 P73 | -1.7961542E 02    | -4.4798551E 02     | -6.2760093E 02 |
| 58 P74 | 3.7950022E 02     | 1.0306176E 02      | 4.8256198E 02  |
| 59 P77 | 3.1730536E 03     | 9.8675615E 02      | 4.7598097E 03  |
| 60 P79 | 3.5648744E 03     | 8.7407047E 02      | 4.4389448E 03  |
| 61 P80 | 3.5641599E 03     | 8.7389532E 02      | 4.4380552E 03  |
| 62 P81 | -6.0406273E 01    | -1.2041926E 02     | -1.8082553E 02 |
| 63 P82 | 4.4098905E 02     | 1.4019364E 02      | 5.8118268E 02  |
| 64 P83 | -5.9113560E 02    | 1.1802201E 03      | 5.8908450E 02  |
| 65 P84 | -1.2465348E 03    | 1.2547048E 03      | 8.1699829E 00  |
| 66 P93 | -4.3923928E 03    | -2.7129212E 03     | -7.1053139E 03 |
| 67 P94 | -1.0245029E 04    | -6.3973515E 03     | -1.6642381E 04 |
| 68 P95 | -1.2860187E 04    | -7.5678766E 03     | -2.0428064E 04 |
| 69 P96 | 4.9607722E 03     | 4.2232257E 03      | 9.1839979E 03  |
| 70 P97 | 7.0169286E 03     | 8.8624148E 00      | 7.0257910E 03  |
| 71 Q19 | 1.7730162E 03     | 7.9793696E 02      | 2.5709531E 03  |
| 72 Q20 | 1.0078873E 03     | 3.2536211E 02      | 1.3332494E 03  |
| 73 Q21 | 6.6754835E 02     | -5.0380396E 02     | 1.6374438E 02  |
| 74 Q22 | -1.3796003E 02    | -1.0106899E 03     | -1.1486499E 03 |
| 75 Q23 | 4.8579273E 02     | -1.8515389E 02     | 3.0063885E 02  |
| 76 Q24 | 1.6406280E 02     | -3.3480284E 02     | -1.7074003E 02 |
| 77 Q26 | 8.4835175E 02     | -8.1632422E 01     | 7.6671934E 02  |
| 78 Q28 | 1.1899587E 03     | -7.9443256E 02     | 3.9552617E 02  |

# INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S3.0<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -1.5193098E 03    | 3.0876348E 03      | 1.5683251E 03  |
| 2 Q2   | -1.8498813E 03    | 1.8308167E 03      | -1.9064636E 01 |
| 3 Q3   | -3.7457205E 03    | 1.8280481E 03      | -1.9176725E 03 |
| 4 Q4   | -4.8539264E 03    | 1.7088732E 03      | -3.1450533E 03 |
| 5 Q5   | -5.1747904E 03    | 2.2751255E 03      | -2.8996649E 03 |
| 5 Q6   | -4.6276692E 03    | 1.7605784E 03      | -2.8670708E 03 |
| 7 Q7   | -5.2270961E 03    | 6.6065323E 01      | -5.1610308E 03 |
| 8 Q8   | -4.2148021E 03    | 1.7282857E 02      | -4.0419736E 03 |
| 9 Q9   | 1.1894247E-04     | -5.8351758E 03     | -5.8351757E 03 |
| 10 Q10 | 9.1792786E 02     | 4.9810010E 02      | 1.4160279E 03  |
| 11 Q11 | 2.4198663E 03     | -1.5362794E 03     | 8.8358684E 02  |
| 12 Q12 | 2.9732524E 03     | -1.1891769E 03     | 1.7840755E 03  |
| 13 Q13 | 3.8050754E 03     | -1.8367991E 03     | 1.9682763E 03  |
| 14 Q14 | 2.4990958E 03     | -1.3597966E 03     | 1.1392992E 03  |
| 15 Q15 | 3.1706268E 03     | -1.3783405E 03     | 1.7922864E 03  |
| 16 Q16 | 6.0561669E 03     | -3.2201661E 02     | 5.7341503E 03  |
| 17 Q17 | 4.6541041E 03     | -8.8492782E 01     | 4.5656114E 03  |
| 18 Q18 | -6.6474178E-06    | 9.3153554E 00      | 9.3153489E 00  |
| 19 Q25 | -3.3934190E 02    | 9.7969398E 02      | 6.4035208E 02  |
| 20 Q30 | -3.3257460E 03    | 1.8281586E 03      | -1.4975874E 03 |
| 21 Q31 | 8.5291462E 02     | -2.0882689E 03     | -1.2353543E 03 |
| 22 Q32 | -2.4360394E 02    | -2.0028073E 03     | -2.2464113E 03 |
| 23 Q33 | 4.7848200E 02     | -5.7489232E 01     | 4.2099277E 02  |
| 24 Q34 | -1.3104641E 03    | 3.3585235E 02      | -9.7461175E 02 |
| 25 Q35 | 6.2240345E 02     | -6.9102185E 02     | -6.8618400E 01 |
| 26 Q36 | -8.1896864E 02    | -1.9281637E 02     | -1.0117850E 03 |
| 27 Q37 | -6.1068661E 02    | 6.8698012E 02      | 7.6293502E 01  |
| 28 Q38 | -4.6275741E 02    | 3.6190852E 02      | -1.0084889E 02 |
| 29 P40 | -8.0621734E 03    | 1.1024303E 04      | 2.9621293E 03  |
| 30 P41 | -8.3468912E 03    | 7.3429535E 03      | -1.0039377E 03 |
| 31 P42 | -1.1768968E 04    | 6.8253068E 03      | -4.9436615E 03 |
| 32 P43 | -1.7540918E 04    | 7.5228351E 03      | -1.0018083E 04 |
| 33 P44 | -1.7814143E 04    | 7.6400140E 03      | -1.0174129E 04 |
| 34 P45 | -2.0256855E 04    | 8.7763696E 03      | -1.1480485E 04 |
| 35 P46 | -2.1871284E 04    | 9.1409242E 03      | -1.2730360E 04 |
| 36 P47 | -2.2651533E 04    | 7.1030466E 03      | -1.5548438E 04 |
| 37 P48 | -2.8397892E 04    | 7.3547673E 03      | -2.1043125E 04 |
| 38 P49 | -2.5658682E 04    | -1.8047218E-05     | -2.5658682E 04 |
| 39 P50 | 3.0022767E 03     | -5.3684951E 03     | -2.3662184E 03 |
| 40 P51 | -3.7808805E 03    | 3.6074719E 03      | -1.7340860E 02 |
| 41 P52 | -9.7350730E 03    | 6.6197447E 03      | -3.1153282E 03 |
| 42 P53 | -1.9304498E 04    | 1.3413792E 04      | -6.3907061E 03 |
| 43 P54 | -1.8659902E 04    | 1.2638544E 04      | -6.0213579E 03 |
| 44 P55 | -1.8980583E 04    | 9.1638322E 03      | -9.8167504E 03 |
| 45 P56 | -2.3159965E 04    | 8.9595392E 03      | -1.4200426E 04 |
| 46 P57 | -2.2073764E 04    | 8.5393368E 03      | -1.3534427E 04 |
| 47 P58 | -2.2037543E 04    | 5.0669067E 03      | -1.6970636E 04 |
| 48 P59 | -2.2568314E 04    | 2.9271170E 03      | -1.9641197E 04 |
| 49 P60 | -2.2321074E 04    | -4.1376529E-06     | -2.2321074E 04 |
| 50 P62 | 1.0621719E 03     | -4.4708428E 02     | 6.1508756E 02  |



## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S3.0<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 1.0619590E 03     | -4.4699466E 02     | 6.1496434E 02  |
| 52 P64 | 1.1658520E 02     | -3.8459961E 00     | 1.1273921E 02  |
| 53 P67 | 8.5030839E 02     | -1.1090992E 02     | 7.3939848E 02  |
| 54 P68 | 8.5013803E 02     | -1.1088768E 02     | 7.3925036E 02  |
| 55 P69 | 2.2234281E 02     | -4.9021001E 01     | 1.7332181E 02  |
| 56 P72 | -1.7965139E 02    | 5.2714420E 02      | 3.4749281E 02  |
| 57 P73 | -1.7961542E 02    | 5.2703859E 02      | 3.4742317E 02  |
| 58 P74 | 3.7950022E 02     | -1.2850037E 02     | 2.5099985E 02  |
| 59 P77 | 3.7730536E 03     | -1.2285213E 03     | 2.5445323E 03  |
| 60 P79 | 3.5648744E 03     | -1.1121651E 03     | 2.4527092E 03  |
| 61 P80 | 3.5641599E 03     | -1.1119423E 03     | 2.4522176E 03  |
| 62 P81 | -6.0406273E 01    | 1.3863659E 02      | 7.8230318E 01  |
| 63 P82 | 4.4098905E 02     | -2.0138631E 02     | 2.3960274E 02  |
| 64 P83 | -5.9113560E 02    | -1.1343993E 03     | -1.7255349E 03 |
| 65 P84 | -1.2465348E 03    | -1.2087861E 03     | -2.4553208E 03 |
| 66 P93 | -4.3923928E 03    | 3.3307209E 03      | -1.0616718E 03 |
| 67 P94 | -1.0245029E 04    | 7.8088624E 03      | -2.4361670E 03 |
| 68 P95 | -1.2860187E 04    | 9.1660368E 03      | -3.6941506E 03 |
| 69 P96 | 4.9607722E 03     | -5.1483127E 03     | -1.8754053E 02 |
| 70 P97 | 7.0169286E 03     | -2.2233076E 02     | 6.7945979E 03  |
| 71 Q19 | 1.7730162E 03     | -8.8680310E 02     | 8.8621309E 02  |
| 72 Q20 | 1.0078873E 03     | -3.0661120E 02     | 7.0127614E 02  |
| 73 Q21 | 6.6754835E 02     | 6.6924742E 02      | 1.3367957E 03  |
| 74 Q22 | -1.3796003E 02    | 1.2854614E 03      | 1.1475014E 03  |
| 75 Q23 | 4.8579273E 02     | 2.7689917E 02      | 7.6269190E 02  |
| 76 Q24 | 1.6406280E 02     | 4.5163029E 02      | 6.1569310E 02  |
| 77 Q26 | 8.4835175E 02     | 1.3317118E 02      | 9.8152294E 02  |
| 78 Q28 | 1.1899587E 03     | 9.0825347E 02      | 2.0982122E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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|    | PT  | S3.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|----|-----|-------------------|-------------------|----------------|
| 1  | 01  | -1.5193098E 03    | -7.9940501E 02    | -2.3187148E 03 |
| 2  | 02  | -1.8498813E 03    | -1.1266675E 03    | -2.9765489E 03 |
| 3  | 03  | -3.7457205E 03    | -1.1445069E 03    | -4.8902274E 03 |
| 4  | 04  | -4.8539264E 03    | -1.2134820E 03    | -6.0674084E 03 |
| 5  | 05  | -5.1747904E 03    | -7.4342105E 02    | -5.9182114E 03 |
| 6  | 06  | -4.6276692E 03    | -4.8989122E 02    | -5.1175603E 03 |
| 7  | 07  | -5.2270961E 03    | 8.9265571E 02     | -4.3344405E 03 |
| 8  | 08  | -4.2148021E 03    | 7.9325067E 02     | -3.4215515E 03 |
| 9  | 09  | 1.1894247E-04     | 1.2043389E 03     | 1.2043390E 03  |
| 10 | 010 | 9.1792786E 02     | 2.6700963E 02     | 1.1849375E 03  |
| 11 | 011 | 2.4198663E 03     | 3.8581622E 02     | 2.8056825E 03  |
| 12 | 012 | 2.9732524E 03     | 6.7664322E 02     | 3.6498956E 03  |
| 13 | 013 | 3.8050754E 03     | 6.7901831E 02     | 4.4840937E 03  |
| 14 | 014 | 2.4990958E 03     | 3.5823226E 02     | 2.8573280E 03  |
| 15 | 015 | 3.1706268E 03     | 6.1060343E 02     | 3.7812302E 03  |
| 16 | 016 | 6.0561669E 03     | 1.8571926E 02     | 6.2418861E 03  |
| 17 | 017 | 4.6541041E 03     | 2.0924267E 02     | 4.8633467E 03  |
| 18 | 018 | -6.6474178E-06    | -4.6593548E 00    | -4.6593614E 00 |
| 19 | 025 | -3.3934190E 02    | 1.8205785E 02     | -1.5728405E 02 |
| 20 | 030 | -3.3257460E 03    | -2.7907583E 02    | -3.6048219E 03 |
| 21 | 031 | 8.5291462E 02     | -4.4243557E 02    | 4.1047904E 02  |
| 22 | 032 | -2.4360394E 02    | -7.7071403E 02    | -1.0143180E 03 |
| 23 | 033 | 4.7848200E 02     | -1.2505038E 02    | 3.5343162E 02  |
| 24 | 034 | -1.3104641E 03    | -4.9245358E 02    | -1.8029177E 03 |
| 25 | 035 | 6.2240345E 02     | -1.6488598E 02    | 4.5751747E 02  |
| 26 | 036 | -8.1896864E 02    | -3.8793389E 02    | -1.2069025E 03 |
| 27 | 037 | -6.1068661E 02    | -7.9698614E 01    | -6.9038522E 02 |
| 28 | 038 | -4.6275741E 02    | 1.0056999E 02     | -3.6218742E 02 |
| 29 | P40 | -8.0621734E 03    | -5.1961792E 02    | -8.5817913E 03 |
| 30 | P41 | -8.3468912E 03    | -3.0904688E 03    | -1.1437360E 04 |
| 31 | P42 | -1.1768968E 04    | -4.2323309E 03    | -1.6001299E 04 |
| 32 | P43 | -1.7540918E 04    | -5.8497375E 03    | -2.3390655E 04 |
| 33 | P44 | -1.7814143E 04    | -5.9408558E 03    | -2.3754999E 04 |
| 34 | P45 | -2.0256855E 04    | -5.1930998E 03    | -2.5449955E 04 |
| 35 | P46 | -2.1871284E 04    | -4.6524388E 03    | -2.6523723E 04 |
| 36 | P47 | -2.2651533E 04    | -2.5816854E 03    | -2.5233218E 04 |
| 37 | P48 | -2.8397892E 04    | -1.5179719E 03    | -2.9915864E 04 |
| 38 | P49 | -2.5658682E 04    | 1.0658156E-05     | -2.5658682E 04 |
| 39 | P50 | 3.0022767E 03     | -2.1187672E 03    | 8.8350946E 02  |
| 40 | P51 | -3.7808805E 03    | -1.5963292E 03    | -5.3772097E 03 |
| 41 | P52 | -9.7350730E 03    | -2.3612185E 03    | -1.2096291E 04 |
| 42 | P53 | -1.9804498E 04    | -3.4124974E 03    | -2.3216995E 04 |
| 43 | P54 | -1.8659902E 04    | -3.2152731E 03    | -2.1875175E 04 |
| 44 | P55 | -1.8980583E 04    | -3.8574835E 03    | -2.2838066E 04 |
| 45 | P56 | -2.3159965E 04    | -5.1836280E 03    | -2.8343593E 04 |
| 46 | P57 | -2.2073764E 04    | -4.9405161E 03    | -2.7014280E 04 |
| 47 | P58 | -2.2037543E 04    | -3.5602529E 03    | -2.5597796E 04 |
| 48 | P59 | -2.2568314E 04    | -2.9262906E 03    | -2.5494604E 04 |
| 49 | P60 | -2.2321074E 04    | -2.9655563E-06    | -2.2321074E 04 |
| 50 | P62 | 1.0621718E 03     | 2.2362262E 02     | 1.2857944E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S3.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|-------------------|----------------|
| 51 P63 | 1.0619590E 03     | 2.2357778E 02     | 1.2855368E 03  |
| 52 P64 | 1.1658520E 02     | 3.6712172E 01     | 1.5329737E 02  |
| 53 P67 | 8.5030839E 02     | 1.2213566E 02     | 9.7244406E 02  |
| 54 P68 | 8.5013803E 02     | 1.2211119E 02     | 9.7224922E 02  |
| 55 P69 | 2.2234281E 02     | 4.6289421E 01     | 2.6863224E 02  |
| 56 P72 | -1.7965139E 02    | -1.7910863E 02    | -3.5876002E 02 |
| 57 P73 | -1.7961542E 02    | -1.7907273E 02    | -3.5868815E 02 |
| 58 P74 | 3.7950022E 02     | 6.0193356E 01     | 4.3969357E 02  |
| 59 P77 | 3.7730536E 03     | 1.0259734E 03     | 4.7990270E 03  |
| 60 P79 | 3.5648744E 03     | 7.2424183E 02     | 4.2891161E 03  |
| 61 P80 | 3.5641599E 03     | 7.2409668E 02     | 4.2882566E 03  |
| 62 P81 | -6.0406273E 01    | -7.9592395E 01    | -1.3999867E 02 |
| 63 P82 | 4.4098905E 02     | 3.7902612E 01     | 4.7889166E 02  |
| 64 P83 | -5.9113560E 02    | 8.7875068E 02     | 2.8761508E 02  |
| 65 P84 | -1.2465348E 03    | 1.0499696E 03     | -1.9656525E 02 |
| 66 P93 | -4.3923928E 03    | -2.3214937E 03    | -6.7138865E 03 |
| 67 P94 | -1.0245029E 04    | -3.6166140E 03    | -1.3861643E 04 |
| 68 P95 | -1.2860187E 04    | -3.7481070E 03    | -1.6608294E 04 |
| 69 P96 | 4.9607722E 03     | 8.6944716E 01     | 5.0477169E 03  |
| 70 P97 | 7.0169286E 03     | 3.5994406E 02     | 7.3768727E 03  |
| 71 Q19 | 1.7730162E 03     | -2.7482190E 02    | 1.4981943E 03  |
| 72 Q20 | 1.0078873E 03     | -6.7921241E 02    | 3.2867493E 02  |
| 73 Q21 | 6.6754835E 02     | 2.8624711E 02     | 9.5379544E 02  |
| 74 Q22 | -1.3796003E 02    | 1.0261170E 02     | -3.5348333E 01 |
| 75 Q23 | 4.8579273E 02     | 2.5358861E 02     | 7.3938134E 02  |
| 76 Q24 | 1.6406280E 02     | 2.2774823E 02     | 3.9181103E 02  |
| 77 Q26 | 8.4835175E 02     | 5.2821168E 02     | 1.3765634E 03  |
| 78 Q28 | 1.1899587E 03     | 6.7549376E 02     | 1.8654525E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -1.1794650E 03    | -3.3120691E 03     | -4.4915341E 03 |
| 2 Q2   | -1.3683566E 03    | -5.0285414E 02     | -1.8712108E 03 |
| 3 Q3   | -3.2646229E 03    | -4.1093040E 02     | -3.6755533E 03 |
| 4 Q4   | -4.2661386E 03    | -2.8114889E 01     | -4.2942535E 03 |
| 5 Q5   | -4.6280276E 03    | -1.9115867E 03     | -6.5396143E 03 |
| 6 Q6   | -4.1874501E 03    | -1.6217939E 03     | -5.8092439E 03 |
| 7 Q7   | -4.9083896E 03    | -1.4771147E 03     | -6.3855042E 03 |
| 8 Q8   | -3.9452567E 03    | -1.5335684E 03     | -5.4788250E 03 |
| 9 Q9   | 1.0928686E-04     | 5.4166592E 03      | 5.4166592E 03  |
| 10 Q10 | 7.8967957E 02     | -1.4630745E 03     | -6.7339495E 02 |
| 11 Q11 | 2.2295673E 03     | 1.5571782E 03      | 3.7867455E 03  |
| 12 Q12 | 2.6725141E 03     | 3.4743143E 02      | 3.0199455E 03  |
| 13 Q13 | 3.4925680E 03     | 1.3796142E 03      | 4.8721823E 03  |
| 14 Q14 | 2.3646697E 03     | 1.3573110E 03      | 3.7219808E 03  |
| 15 Q15 | 2.8889884E 03     | 8.1718949E 02      | 3.7061779E 03  |
| 16 Q16 | 5.3275315E 03     | -5.5051709E 02     | 4.7770144E 03  |
| 17 Q17 | 4.0552534E 03     | -8.1211423E 02     | 3.2431392E 03  |
| 18 Q18 | -5.7750328E-06    | -4.1355867E 00     | -4.1355924E 00 |
| 19 Q25 | -3.9217079E 02    | -2.0185134E 03     | -2.4106842E 03 |
| 20 Q30 | -3.1121580E 03    | -2.2089568E 03     | -5.3211147E 03 |
| 21 Q31 | 9.8721930E 02     | 4.3752738E 03      | 5.3624932E 03  |
| 22 Q32 | 3.0873830E 01     | 5.0075667E 03      | 5.0384405E 03  |
| 23 Q33 | 4.8611882E 02     | 3.7180792E 02      | 8.5792675E 02  |
| 24 Q34 | -1.1322054E 03    | 5.9301525E 02      | -5.3919014E 02 |
| 25 Q35 | 6.6378633E 02     | 1.4822757E 03      | 2.1460620E 03  |
| 26 Q36 | -6.4847034E 02    | 1.2077469E 03      | 5.5927653E 02  |
| 27 Q37 | -5.6354995E 02    | -9.4578089E 02     | -1.5093308E 03 |
| 28 Q38 | -4.5868580E 02    | -7.9469135E 02     | -1.2533771E 03 |
| 29 P40 | -7.6890045E 03    | -1.6651671E 04     | -2.4340675E 04 |
| 30 P41 | -6.9851183E 03    | -4.9872969E 03     | -1.1972415E 04 |
| 31 P42 | -9.9867080E 03    | -1.5589774E 03     | -1.1545686E 04 |
| 32 P43 | -1.4991239E 04    | 1.0002914E 03      | -1.3990948E 04 |
| 33 P44 | -1.5224749E 04    | 1.0158726E 03      | -1.4208877E 04 |
| 34 P45 | -1.7639123E 04    | -2.3545403E 03     | -1.9993663E 04 |
| 35 P46 | -1.9261197E 04    | -4.0277214E 03     | -2.3288918E 04 |
| 36 P47 | -2.0288754E 04    | -4.7455153E 03     | -2.5034270E 04 |
| 37 P48 | -2.5665246E 04    | -6.8272601E 03     | -3.2492506E 04 |
| 38 P49 | -2.3189623E 04    | 1.1043513E-05      | -2.3189623E 04 |
| 39 P50 | 3.7508175E 03     | 1.3258982E 04      | 1.7009800E 04  |
| 40 P51 | -3.0831401E 03    | -2.3168248E 03     | -5.3999648E 03 |
| 41 P52 | -8.6047113E 03    | -5.3708774E 03     | -1.3975589E 04 |
| 42 P53 | -1.8112764E 04    | -1.3887579E 04     | -3.2000344E 04 |
| 43 P54 | -1.7065941E 04    | -1.3084949E 04     | -3.0150890E 04 |
| 44 P55 | -1.7118770E 04    | -5.8537735E 03     | -2.2972543E 04 |
| 45 P56 | -2.0628002E 04    | -2.4237982E 03     | -2.3051800E 04 |
| 46 P57 | -1.9660548E 04    | -2.3101218E 03     | -2.1970670E 04 |
| 47 P58 | -1.9407532E 04    | 9.6862619E 02      | -1.8438906E 04 |
| 48 P59 | -1.9689443E 04    | 3.4561646E 03      | -1.6233278E 04 |
| 49 P60 | -1.9473741E 04    | 1.5006377E-05      | -1.9473741E 04 |
| 50 P62 | 9.6050894E 02     | 1.9848475E 02      | 1.1589937E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 9.6031647E 02     | 1.9844504E 02      | 1.1587615E 03  |
| 52 P64 | 1.0105084E 02     | -7.9842802E 01     | 2.1208040E 01  |
| 53 P67 | 8.0239882E 02     | -1.0977144E 02     | 6.9262740E 02  |
| 54 P68 | 8.0223811E 02     | -1.0974946E 02     | 6.9248865E 02  |
| 55 P69 | 2.0098740E 02     | -2.8701252E 01     | 1.7228615E 02  |
| 56 P72 | -1.3268554E 02    | -4.7830688E 02     | -6.1099242E 02 |
| 57 P73 | -1.3265898E 02    | -4.7821111E 02     | -6.1087009E 02 |
| 58 P74 | 3.4495977E 02     | 6.4622294E 01      | 4.0958206E 02  |
| 59 P77 | 3.2393128E 03     | -3.9574104E 02     | 2.8435717E 03  |
| 60 P79 | 3.1217900E 03     | 6.4267163E 01      | 3.1860572E 03  |
| 61 P80 | 3.1211644E 03     | 6.4254277E 01      | 3.1854187E 03  |
| 62 P81 | -4.1645026E 01    | -5.8798329E 01     | -1.0044335E 02 |
| 63 P82 | 3.8480406E 02     | 2.1600464E 02      | 6.0080870E 02  |
| 64 P83 | -4.8988032E 02    | 3.0393402E 02      | -1.8594630E 02 |
| 65 P84 | -1.2746322E 03    | 3.2538471E 01      | -1.2420937E 03 |
| 66 P93 | -3.3683600E 03    | -2.5610262E 02     | -3.6244626E 03 |
| 67 P94 | -8.6017305E 03    | -4.5622959E 03     | -1.3164026E 04 |
| 68 P95 | -1.1232150E 04    | -6.4503073E 03     | -1.7682457E 04 |
| 69 P96 | 4.6435202E 03     | 6.3952236E 03      | 1.1038744E 04  |
| 70 P97 | 6.1140496E 03     | -1.1849407E 03     | 4.9291088E 03  |
| 71 Q19 | 1.8339073E 03     | 1.9416400E 03      | 3.7755473E 03  |
| 72 Q20 | 1.2471589E 03     | 1.8970284E 03      | 3.1441873E 03  |
| 73 Q21 | 5.5490603E 02     | -1.7758831E 03     | -1.2209771E 03 |
| 74 Q22 | -1.6313965E 02    | -2.3566760E 03     | -2.5198156E 03 |
| 75 Q23 | 4.0700482E 02     | -1.0466926E 03     | -6.3968773E 02 |
| 76 Q24 | 8.8703728E 01     | -1.2701349E 03     | -1.1814312E 03 |
| 77 Q26 | 6.4516659E 02     | -1.4228002E 03     | -7.7763360E 02 |
| 78 Q28 | 8.1755682E 02     | -3.0652328E 03     | -2.2476760E 03 |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -1.1794650E 03    | 4.5550550E 03      | 3.3755900E 03  |
| 2 Q2   | -1.3683566E 03    | 1.0632209E 03      | -3.0513568E 02 |
| 3 Q3   | -3.2646229E 03    | 1.0124299E 03      | -2.2521930E 03 |
| 4 Q4   | -4.2661386E 03    | 5.8601795E 02      | -3.6801207E 03 |
| 5 Q5   | -4.6280276E 03    | 2.9684564E 03      | -1.6595712E 03 |
| 6 Q6   | -4.1874501E 03    | 2.5112805E 03      | -1.6761695E 03 |
| 7 Q7   | -4.9083896E 03    | 2.3783830E 03      | -2.5300066E 03 |
| 8 Q8   | -3.9452567E 03    | 2.3561234E 03      | -1.5891333E 03 |
| 9 Q9   | 1.0928686E-04     | -9.3726118E 03     | -9.3726118E 03 |
| 10 Q10 | 7.8967957E 02     | 1.7285549E 03      | 2.5182345E 03  |
| 11 Q11 | 2.2295673E 03     | -2.2959960E 03     | -6.6428680E 01 |
| 12 Q12 | 2.6725141E 03     | -8.2870946E 02     | 1.8438047E 03  |
| 13 Q13 | 3.4925680E 03     | -2.1987973E 03     | 1.2937707E 03  |
| 14 Q14 | 2.3646697E 03     | -1.9902911E 03     | 3.7437869E 02  |
| 15 Q15 | 2.8889884E 03     | -1.3964080E 03     | 1.4925804E 03  |
| 16 Q16 | 5.3275315E 03     | -2.1620456E 02     | 5.1113269E 03  |
| 17 Q17 | 4.0552534E 03     | 3.3850265E 02      | 4.3937560E 03  |
| 18 Q18 | -5.7750328E-06    | 8.1002703E 00      | 8.1002645E 00  |
| 19 Q25 | -3.9217079E 02    | 2.5385840E 03      | 2.1464132E 03  |
| 20 Q30 | -3.1121580E 03    | 3.1838465E 03      | 7.1688538E 01  |
| 21 Q31 | 9.8721930E 02     | -5.5474036E 03     | -4.5601844E 03 |
| 22 Q32 | 3.0873830E 01     | -6.1896641E 03     | -6.1587903E 03 |
| 23 Q33 | 4.8611882E 02     | -4.3593706E 02     | 5.0181755E 01  |
| 24 Q34 | -1.1322054E 03    | -5.2218182E 02     | -1.6543872E 03 |
| 25 Q35 | 6.6378633E 02     | -1.8820255E 03     | -1.2182392E 03 |
| 26 Q36 | -6.4847034E 02    | -1.3832173E 01     | -2.0316876E 03 |
| 27 Q37 | -5.6354995E 02    | 1.2597603E 03      | 6.9621038E 02  |
| 28 Q38 | -4.5868580E 02    | 1.0212990E 03      | 5.6261319E 02  |
| 29 P40 | -7.6890045E 03    | 2.2120702E 04      | 1.4431698E 04  |
| 30 P41 | -6.9851183E 03    | 7.8476681E 03      | 8.6254973E 02  |
| 31 P42 | -9.9867080E 03    | 3.8824083E 03      | -6.1042998E 03 |
| 32 P43 | -1.4991239E 04    | 1.3057995E 03      | -1.3685440E 04 |
| 33 P44 | -1.5224749E 04    | 1.3261390E 03      | -1.3898610E 04 |
| 34 P45 | -1.7639123E 04    | 5.6165830E 03      | -1.2022540E 04 |
| 35 P46 | -1.9261197E 04    | 7.7474763E 03      | -1.1513721E 04 |
| 36 P47 | -2.0288754E 04    | 8.6116629E 03      | -1.1677092E 04 |
| 37 P48 | -2.5665246E 04    | 1.1813419E 04      | -1.3851828E 04 |
| 38 P49 | -2.3189623E 04    | -1.1620211E-05     | -2.3189623E 04 |
| 39 P50 | 3.7508175E 03     | -1.6723132E 04     | -1.2972315E 04 |
| 40 P51 | -3.0831401E 03    | 3.6597497E 03      | 5.7660962E 02  |
| 41 P52 | -8.6047113E 03    | 8.1406331E 03      | -4.6407812E 02 |
| 42 P53 | -1.8112764E 04    | 1.9938421E 04      | 1.8256565E 03  |
| 43 P54 | -1.7065941E 04    | 1.8786084E 04      | 1.7201431E 03  |
| 44 P55 | -1.7118770E 04    | 9.7909447E 03      | -7.3278253E 03 |
| 45 P56 | -2.0628002E 04    | 6.0287951E 03      | -1.4599207E 04 |
| 46 P57 | -1.9660548E 04    | 5.7460443E 03      | -1.3914504E 04 |
| 47 P58 | -1.9407532E 04    | 1.8289369E 03      | -1.7578595E 04 |
| 48 P59 | -1.9689443E 04    | -1.1282955E 03     | -2.0817738E 04 |
| 49 P60 | -1.9473741E 04    | -1.6238353E-05     | -1.9473741E 04 |
| 50 P62 | 9.6050894E 02     | -3.8876711E 02     | 5.7174184E 02  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 9.6031647E 02     | -3.8868926E 02     | 5.7162721E 02  |
| 52 P64 | 1.0105084E 02     | 8.3960884E 01      | 1.8501173E 02  |
| 53 P67 | 8.0239882E 02     | 7.0857104E 01      | 8.7325593E 02  |
| 54 P68 | 8.0223811E 02     | 7.0842934E 01      | 8.7308104E 02  |
| 55 P69 | 2.0098740E 02     | 1.2005733E 01      | 2.1299313E 02  |
| 56 P72 | -1.3268554E 02    | 6.7073250E 02      | 5.3804696E 02  |
| 57 P73 | -1.3265898E 02    | 6.7059817E 02      | 5.3793919E 02  |
| 58 P74 | 3.4495977E 02     | -1.2197190E 02     | 2.2298787E 02  |
| 59 P77 | 3.2393128E 03     | -3.5666411E 01     | 3.2036464E 03  |
| 60 P79 | 3.1217900E 03     | -5.4547663E 02     | 2.5763134E 03  |
| 61 P80 | 3.1211644E 03     | -5.4536729E 02     | 2.5757971E 03  |
| 62 P81 | -4.1645026E 01    | 9.4896653E 01      | 5.3251626E 01  |
| 63 P82 | 3.8480406E 02     | -3.3272498E 02     | 5.2079086E 01  |
| 64 P83 | -4.8988032E 02    | -2.0669116E 02     | -6.9657148E 02 |
| 65 P84 | -1.2746322E 03    | 6.4912245E 01      | -1.2097199E 03 |
| 66 P93 | -3.3683600E 03    | 1.2520961E 03      | -2.1162639E 03 |
| 67 P94 | -8.6017305E 03    | 7.5173919E 03      | -1.0843386E 03 |
| 68 P95 | -1.1232150E 04    | 1.0071147E 04      | -1.1610026E 03 |
| 69 P96 | 4.6435202E 03     | -1.0715749E 04     | -6.0722288E 03 |
| 70 P97 | 6.1140496E 03     | 4.3304182E 02      | 6.5470914E 03  |
| 71 Q19 | 1.8339073E 03     | -2.5735691E 03     | -7.3966182E 02 |
| 72 Q20 | 1.2471589E 03     | -2.3554614E 03     | -1.1083025E 03 |
| 73 Q21 | 5.5490603E 02     | 2.1404620E 03      | 2.6953680E 03  |
| 74 Q22 | -1.6313965E 02    | 2.9889966E 03      | 2.8258570E 03  |
| 75 Q23 | 4.0700482E 02     | 1.2247794E 03      | 1.6317842E 03  |
| 76 Q24 | 8.8703728E 01     | 1.5312062E 03      | 1.6199099E 03  |
| 77 Q26 | 6.4516659E 02     | 1.6084707E 03      | 2.2536373E 03  |
| 78 Q28 | 8.1755682E 02     | 3.6251301E 03      | 4.4426869E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -1.1794650E 03    | -2.5031859E 03     | -3.6826509E 03 |
| 2 Q2   | -1.3683566E 03    | -1.4323986E 03     | -2.8007552E 03 |
| 3 Q3   | -3.2646229E 03    | -1.4703533E 03     | -4.7349762E 03 |
| 4 Q4   | -4.2661386E 03    | -1.3354284E 03     | -5.6015670E 03 |
| 5 Q5   | -4.6280276E 03    | -1.7149262E 03     | -6.3429538E 03 |
| 6 Q6   | -4.1874501E 03    | -1.7653074E 03     | -5.9527574E 03 |
| 7 Q7   | -4.9083896E 03    | -1.7564388E 01     | -4.9259539E 03 |
| 8 Q8   | -3.9452567E 03    | -9.7107031E 01     | -4.0423637E 03 |
| 9 Q9   | 1.0928686E-04     | 4.8487053E 03      | 4.8487054E 03  |
| 10 Q10 | 7.8967957E 02     | -3.7183302E 02     | 4.1784655E 02  |
| 11 Q11 | 2.2295673E 03     | 1.3165188E 03      | 3.5460861E 03  |
| 12 Q12 | 2.6725141E 03     | 1.0272346E 03      | 3.6997488E 03  |
| 13 Q13 | 3.4925680E 03     | 1.5629779E 03      | 5.0555459E 03  |
| 14 Q14 | 2.3646697E 03     | 1.2087339E 03      | 3.5734037E 03  |
| 15 Q15 | 2.8889884E 03     | 1.2392043E 03      | 4.1281928E 03  |
| 16 Q16 | 5.3275315E 03     | 8.8503616E 01      | 5.4160351E 03  |
| 17 Q17 | 4.0552534E 03     | -4.3509775E 01     | 4.0117436E 03  |
| 18 Q18 | -5.7750328E-06    | -7.8014122E 00     | -7.8014179E 00 |
| 19 Q25 | -3.9217079E 02    | -7.8055830E 02     | -1.1727291E 03 |
| 20 Q30 | -3.1121580E 03    | -1.5225197E 03     | -4.6346776E 03 |
| 21 Q31 | 9.8721930E 02     | 1.6819829E 03      | 2.6692022E 03  |
| 22 Q32 | 3.0873830E 01     | 1.5983441E 03      | 1.6292180E 03  |
| 23 Q33 | 4.8611882E 02     | 1.0665354E 01      | 4.9678417E 02  |
| 24 Q34 | -1.1322054E 03    | -3.1520603E 02     | -1.4474114E 03 |
| 25 Q35 | 6.6378633E 02     | 5.5668198E 02      | 1.2204683E 03  |
| 26 Q36 | -6.4847034E 02    | 1.5705190E 02      | -4.9141844E 02 |
| 27 Q37 | -5.6354995E 02    | -5.5331749E 02     | -1.1168674E 03 |
| 28 Q38 | -4.5868580E 02    | -2.7183803E 02     | -7.3052383E 02 |
| 29 P40 | -7.6890045E 03    | -9.1738681E 03     | -1.6862873E 04 |
| 30 P41 | -6.9851183E 03    | -6.0354782E 03     | -1.3020597E 04 |
| 31 P42 | -9.9867080E 03    | -5.6179007E 03     | -1.5604609E 04 |
| 32 P43 | -1.4991239E 04    | -6.1278700E 03     | -2.1119109E 04 |
| 33 P44 | -1.5224749E 04    | -6.2233205E 03     | -2.1448070E 04 |
| 34 P45 | -1.7639123E 04    | -6.9289624E 03     | -2.4568085E 04 |
| 35 P46 | -1.9261197E 04    | -7.7311583E 03     | -2.6992355E 04 |
| 36 P47 | -2.0288754E 04    | -5.9648649E 03     | -2.6253619E 04 |
| 37 P48 | -2.5665246E 04    | -6.1114008E 03     | -3.1776647E 04 |
| 38 P49 | -2.3189623E 04    | 1.7775480E-05      | -2.3189623E 04 |
| 39 P50 | 3.7508175E 03     | 4.5220796E 03      | 8.2728970E 03  |
| 40 P51 | -3.0831401E 03    | -2.9307628E 03     | -6.0139028E 03 |
| 41 P52 | -8.6047113E 03    | -5.4445412E 03     | -1.4049252E 04 |
| 42 P53 | -1.8112764E 04    | -1.1109028E 04     | -2.9221792E 04 |
| 43 P54 | -1.7065941E 04    | -1.0466984E 04     | -2.7532925E 04 |
| 44 P55 | -1.7118770E 04    | -7.7346618E 03     | -2.4853432E 04 |
| 45 P56 | -2.0628002E 04    | -7.6943866E 03     | -2.8322388E 04 |
| 46 P57 | -1.9660548E 04    | -7.3335200E 03     | -2.6994068E 04 |
| 47 P58 | -1.9407532E 04    | -4.1087641E 03     | -2.3516296E 04 |
| 48 P59 | -1.9689443E 04    | -2.1611973E 03     | -2.1850640E 04 |
| 49 P60 | -1.9473741E 04    | 3.5571646E-06      | -1.9473741E 04 |
| 50 P62 | 9.6050894E 02     | 3.7442359E 02      | 1.3349325E 03  |



## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 9.6031647E 02     | 3.7434855E 02      | 1.3346650E 03  |
| 52 P64 | 1.0105084E 02     | 4.7016125E 00      | 1.0575245E 02  |
| 53 P67 | 8.0239882E 02     | 9.7279470E 01      | 8.9967829E 02  |
| 54 P68 | 8.0223811E 02     | 9.7259961E 01      | 8.9949807E 02  |
| 55 P69 | 2.0098740E 02     | 4.0716000E 01      | 2.4170340E 02  |
| 56 P72 | -1.3268554E 02    | -4.4807527E 02     | -5.8076081E 02 |
| 57 P73 | -1.3265898E 02    | -4.4798551E 02     | -5.8064449E 02 |
| 58 P74 | 3.4495977E 02     | 1.0306176E 02      | 4.4802153E 02  |
| 59 P77 | 3.2393128E 03     | 9.8675615E 02      | 4.2260689E 03  |
| 60 P79 | 3.1217900E 03     | 8.7407047E 02      | 3.9958605E 03  |
| 61 P80 | 3.1211644E 03     | 8.7389532E 02      | 3.9950597E 03  |
| 62 P81 | -4.1645026E 01    | -1.2041926E 02     | -1.6206428E 02 |
| 63 P82 | 3.8480406E 02     | 1.4019364E 02      | 5.2499770E 02  |
| 64 P83 | -4.8988032E 02    | 1.1802201E 03      | 6.9033979E 02  |
| 65 P84 | -1.2746322E 03    | 1.2547048E 03      | -1.9927383E 01 |
| 66 P93 | -3.3683600E 03    | -2.7129212E 03     | -6.0812811E 03 |
| 67 P94 | -8.6017305E 03    | -6.3973515E 03     | -1.4999082E 04 |
| 68 P95 | -1.1232150E 04    | -7.5678766E 03     | -1.8800026E 04 |
| 69 P96 | 4.6435202E 03     | 4.2232257E 03      | 8.8667459E 03  |
| 70 P97 | 6.1140496E 03     | 8.8624148E 00      | 6.1229119E 03  |
| 71 Q19 | 1.8339073E 03     | 7.9793696E 02      | 2.6318442E 03  |
| 72 Q20 | 1.2471589E 03     | 3.2536211E 02      | 1.5725210E 03  |
| 73 Q21 | 5.5490603E 02     | -5.0380396E 02     | 5.1102062E 01  |
| 74 Q22 | -1.6313965E 02    | -1.0106899E 03     | -1.1738295E 03 |
| 75 Q23 | 4.0700482E 02     | -1.8515389E 02     | 2.2185094E 02  |
| 76 Q24 | 8.8703728E 01     | -3.3480284E 02     | -2.4609911E 02 |
| 77 Q26 | 6.4516659E 02     | -8.1632422E 01     | 5.6353417E 02  |
| 78 Q28 | 8.1755682E 02     | -7.9443256E 02     | 2.3124267E 01  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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|    |     | S2.5<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|----|-----|-------------------|--------------------|----------------|
| 1  | Q1  | -1.1794650E 03    | 3.0876348E 03      | 1.9081699E 03  |
| 2  | Q2  | -1.3683566E 03    | 1.8308167E 03      | 4.6246006E 02  |
| 3  | Q3  | -3.2646229E 03    | 1.8280481E 03      | -1.4365749E 03 |
| 4  | Q4  | -4.2661386E 03    | 1.7088732E 03      | -2.5572655E 03 |
| 5  | Q5  | -4.6280276E 03    | 2.2751255E 03      | -2.3529021E 03 |
| 6  | Q6  | -4.1874501E 03    | 1.7605984E 03      | -2.4268517E 03 |
| 7  | Q7  | -4.9083896E 03    | 6.6065323E 01      | -4.8423243E 03 |
| 8  | Q8  | -3.9452567E 03    | 1.7282857E 02      | -3.7724281E 03 |
| 9  | Q9  | 1.0928686E-04     | -5.8351758E 03     | -5.8351757E 03 |
| 10 | Q10 | 7.8967957E 02     | 4.9810010E 02      | 1.2877797E 03  |
| 11 | Q11 | 2.2295673E 03     | -1.5362794E 03     | 6.9328786E 02  |
| 12 | Q12 | 2.6725141E 03     | -1.1891769E 03     | 1.4833372E 03  |
| 13 | Q13 | 3.4925680E 03     | -1.8367991E 03     | 1.6557689E 03  |
| 14 | Q14 | 2.3646697E 03     | -1.3597966E 03     | 1.0048731E 03  |
| 15 | Q15 | 2.8889884E 03     | -1.3783405E 03     | 1.5106480E 03  |
| 16 | Q16 | 5.3275315E 03     | -3.2201661E 02     | 5.0055149E 03  |
| 17 | Q17 | 4.0552534E 03     | -8.8492782E 01     | 3.9667606E 03  |
| 18 | Q18 | -5.7750328E-06    | 9.3153554E 00      | 9.3153497E 00  |
| 19 | Q25 | -3.9217079E 02    | 9.7969398E 02      | 5.8752319E 02  |
| 20 | Q30 | -3.1121580E 03    | 1.8281586E 03      | -1.2839993E 03 |
| 21 | Q31 | 9.8721930E 02     | -2.0882689E 03     | -1.1010496E 03 |
| 22 | Q32 | 3.0873830E 01     | -2.0028073E 03     | -1.9719335E 03 |
| 23 | Q33 | 4.8611882E 02     | -5.7489232E 01     | 4.2862959E 02  |
| 24 | Q34 | -1.1322054E 03    | 3.3585235E 02      | -7.9635305E 02 |
| 25 | Q35 | 6.6378633E 02     | -6.9102185E 02     | -2.7235519E 01 |
| 26 | Q36 | -6.4847034E 02    | -1.9281637E 02     | -8.4128671E 02 |
| 27 | Q37 | -5.6354995E 02    | 6.8698012E 02      | 1.2343016E 02  |
| 28 | Q38 | -4.5868580E 02    | 3.6190852E 02      | -9.6777278E 01 |
| 29 | P40 | -7.6890045E 03    | 1.1024303E 04      | 3.3352982E 03  |
| 30 | P41 | -6.9851183E 03    | 7.3429535E 03      | 3.5783520E 02  |
| 31 | P42 | -9.9867080E 03    | 6.8253068E 03      | -3.1614013E 03 |
| 32 | P43 | -1.4991239E 04    | 7.5228351E 03      | -7.4684039E 03 |
| 33 | P44 | -1.5224749E 04    | 7.6400140E 03      | -7.5847355E 03 |
| 34 | P45 | -1.7639123E 04    | 8.7763696E 03      | -8.8627534E 03 |
| 35 | P46 | -1.9261197E 04    | 9.1409242E 03      | -1.0120273E 04 |
| 36 | P47 | -2.0288754E 04    | 7.1030946E 03      | -1.3185660E 04 |
| 37 | P48 | -2.5665246E 04    | 7.3547673E 03      | -1.8310479E 04 |
| 38 | P49 | -2.3189623E 04    | -1.8047218E-05     | -2.3189623E 04 |
| 39 | P50 | 3.7508175E 03     | -5.3684951E 03     | -1.6176776E 03 |
| 40 | P51 | -3.0831401E 03    | 3.6074719E 03      | 5.2433187E 02  |
| 41 | P52 | -8.6047113E 03    | 6.6197447E 03      | -1.9849665E 03 |
| 42 | P53 | -1.8112764E 04    | 1.3413792E 04      | -4.6989723E 03 |
| 43 | P54 | -1.7065941E 04    | 1.2638544E 04      | -4.4273967E 03 |
| 44 | P55 | -1.7118770E 04    | 9.1638322E 03      | -7.9549377E 03 |
| 45 | P56 | -2.0628002E 04    | 8.9595392E 03      | -1.1668463E 04 |
| 46 | P57 | -1.9660548E 04    | 8.5393368E 03      | -1.1121211E 04 |
| 47 | P58 | -1.9407532E 04    | 5.0669067E 03      | -1.4340625E 04 |
| 48 | P59 | -1.9689443E 04    | 2.9271170E 03      | -1.6762326E 04 |
| 49 | P60 | -1.9473741E 04    | -4.1376529E-06     | -1.9473741E 04 |
| 50 | P62 | 9.6050894E 02     | -4.4708428E 02     | 5.1342466E 02  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 9.6031647E 02     | -4.4699466E 02     | 5.1332180E 02  |
| 52 P64 | 1.0105084E 02     | -3.8459961E 00     | 9.7204846E 01  |
| 53 P67 | 8.0239882E 02     | -1.1090992E 02     | 6.9148891E 02  |
| 54 P68 | 8.0223811E 02     | -1.1088768E 02     | 6.9135043E 02  |
| 55 P69 | 2.0098740E 02     | -4.9021001E 01     | 1.5196640E 02  |
| 56 P72 | -1.3268554E 02    | 5.2714420E 02      | 3.9445867E 02  |
| 57 P73 | -1.3265898E 02    | 5.2703859E 02      | 3.9437961E 02  |
| 58 P74 | 3.4495977E 02     | -1.2850037E 02     | 2.1645941E 02  |
| 59 P77 | 3.2393128E 03     | -1.2285213E 03     | 2.0107914E 03  |
| 60 P79 | 3.1217900E 03     | -1.1121651E 03     | 2.0096248E 03  |
| 61 P80 | 3.1211644E 03     | -1.1119423E 03     | 2.0092221E 03  |
| 62 P81 | -4.1645026E 01    | 1.3863659E 02      | 9.6991564E 01  |
| 63 P82 | 3.8480406E 02     | -2.0138631E 02     | 1.8341775E 02  |
| 64 P83 | -4.8988032E 02    | -1.1343993E 03     | -1.6242796E 03 |
| 65 P84 | -1.2746322E 03    | -1.2087861E 03     | -2.4834182E 03 |
| 66 P93 | -3.3683600E 03    | 3.3307209E 03      | -3.7639038E 01 |
| 67 P94 | -8.6017305E 03    | 7.8088624E 03      | 7.9286804E 02  |
| 68 P95 | -1.1232150E 04    | 9.1660368E 03      | -2.0661130E 03 |
| 69 P96 | 4.6435202E 03     | -5.1483127E 03     | -5.0479254E 02 |
| 70 P97 | 6.1140496E 03     | -2.2233076E 02     | 5.8917188E 03  |
| 71 Q19 | 1.8339073E 03     | -8.8680310E 02     | 9.4710419E 02  |
| 72 Q20 | 1.2471589E 03     | -3.0661120E 02     | 9.4054769E 02  |
| 73 Q21 | 5.5490603E 02     | 6.6924742E 02      | 1.2241534E 03  |
| 74 Q22 | -1.6313965E 02    | 1.2854614E 03      | 1.1223218E 03  |
| 75 Q23 | 4.0700482E 02     | 2.7689917E 02      | 6.8390399E 02  |
| 76 Q24 | 8.8703728E 01     | 4.5163029E 02      | 5.4033402E 02  |
| 77 Q26 | 6.4516659E 02     | 1.3317118E 02      | 7.7833776E 02  |
| 78 Q28 | 8.1755682E 02     | 9.0825347E 02      | 1.7258103E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.5<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|-------------------|----------------|
| 1 Q1   | -1.1794650E 03    | -7.9940501E 02    | -1.9788700E 03 |
| 2 Q2   | -1.3683566E 03    | -1.1266675E 03    | -2.4950241E 03 |
| 3 Q3   | -3.2646229E 03    | -1.1445069E 03    | -4.4091298E 03 |
| 4 Q4   | -4.2661386E 03    | -1.2134820E 03    | -5.4796206E 03 |
| 5 Q5   | -4.6280276E 03    | -7.4342105E 02    | -5.3714486E 03 |
| 6 Q6   | -4.1874501E 03    | -4.8989122E 02    | -4.6773412E 03 |
| 7 Q7   | -4.9083896E 03    | 8.9265571E 02     | -4.0157338E 03 |
| 8 Q8   | -3.9452567E 03    | 7.9325067E 02     | -3.1520060E 03 |
| 9 Q9   | 1.0928686E-04     | 1.2043389E 03     | 1.2043390E 03  |
| 10 Q10 | 7.8967957E 02     | 2.6700963E 02     | 1.0566892E 03  |
| 11 Q11 | 2.2295673E 03     | 3.8581622E 02     | 2.6153835E 03  |
| 12 Q12 | 2.6725141E 03     | 6.7664322E 02     | 3.3491573E 03  |
| 13 Q13 | 3.4925680E 03     | 6.7901831E 02     | 4.1715863E 03  |
| 14 Q14 | 2.3646697E 03     | 3.5823226E 02     | 2.7229020E 03  |
| 15 Q15 | 2.8889884E 03     | 6.1060343E 02     | 3.4995919E 03  |
| 16 Q16 | 5.3275315E 03     | 1.8571926E 02     | 5.5132507E 03  |
| 17 Q17 | 4.0552534E 03     | 2.0924267E 02     | 4.2644960E 03  |
| 18 Q18 | -5.7750328E-06    | -4.6593548E 00    | -4.6593605E 00 |
| 19 Q25 | -3.9217079E 02    | 1.8205785E 02     | -2.1011294E 02 |
| 20 Q30 | -3.1121580E 03    | -2.7907583E 02    | -3.3912338E 03 |
| 21 Q31 | 9.8721930E 02     | -4.4243557E 02    | 5.4478373E 02  |
| 22 Q32 | 3.0873830E 01     | -7.7071403E 02    | -7.3984020E 02 |
| 23 Q33 | 4.8611882E 02     | -1.2505038E 02    | 3.6106845E 02  |
| 24 Q34 | -1.1322054E 03    | -4.9245358E 02    | -1.6246590E 03 |
| 25 Q35 | 6.6378633E 02     | -1.6488598E 02    | 4.9890035E 02  |
| 26 Q36 | -6.4847034E 02    | -3.8793389E 02    | -1.0364042E 03 |
| 27 Q37 | -5.6354995E 02    | -7.9698614E 01    | -6.4324856E 02 |
| 28 Q38 | -4.5868580E 02    | 1.0056999E 02     | -3.5811581E 02 |
| 29 P40 | -7.6890045E 03    | -5.1961792E 02    | -8.2086223E 03 |
| 30 P41 | -6.9851183E 03    | -3.0904688E 03    | -1.0075587E 04 |
| 31 P42 | -9.9867080E 03    | -4.2323309E 03    | -1.4219039E 04 |
| 32 P43 | -1.4991239E 04    | -5.8497375E 03    | -2.0840977E 04 |
| 33 P44 | -1.5224749E 04    | -5.9408558E 03    | -2.1165605E 04 |
| 34 P45 | -1.7639123E 04    | -5.1930998E 03    | -2.2832223E 04 |
| 35 P46 | -1.9261197E 04    | -4.6524388E 03    | -2.3913636E 04 |
| 36 P47 | -2.0288754E 04    | -2.5816854E 03    | -2.2870440E 04 |
| 37 P48 | -2.5665246E 04    | -1.5179719E 03    | -2.7183218E 04 |
| 38 P49 | -2.3189623E 04    | 1.0658156E-05     | -2.3189623E 04 |
| 39 P50 | 3.7508175E 03     | -2.1187672E 03    | 1.6320503E 03  |
| 40 P51 | -3.0831401E 03    | -1.5963292E 03    | -4.6794693E 03 |
| 41 P52 | -8.6047113E 03    | -2.3612185E 03    | -1.0965930E 04 |
| 42 P53 | -1.8112764E 04    | -3.4124974E 03    | -2.1525261E 04 |
| 43 P54 | -1.7065941E 04    | -3.2152731E 03    | -2.0281214E 04 |
| 44 P55 | -1.7118770E 04    | -3.8574835E 03    | -2.0976253E 04 |
| 45 P56 | -2.0628002E 04    | -5.1836280E 03    | -2.5811630E 04 |
| 46 P57 | -1.9660548E 04    | -4.9405161E 03    | -2.4601064E 04 |
| 47 P58 | -1.9407532E 04    | -3.5602529E 03    | -2.2967784E 04 |
| 48 P59 | -1.9689443E 04    | -2.9262906E 03    | -2.2615733E 04 |
| 49 P60 | -1.9473741E 04    | -2.9655563E-06    | -1.9473741E 04 |
| 50 P62 | 9.6050894E 02     | 2.2362262E 02     | 1.1841315E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | 52.5<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|-------------------|----------------|
| 51 P63 | 9.6031647E 02     | 2.2357778E 02     | 1.1838942E 03  |
| 52 P64 | 1.0105084E 02     | 3.6712172E 01     | 1.3776301E 02  |
| 53 P67 | 8.0239882E 02     | 1.2213566E 02     | 9.2453449E 02  |
| 54 P68 | 8.0223811E 02     | 1.2211119E 02     | 9.2434930E 02  |
| 55 P69 | 2.0098740E 02     | 4.6289421E 01     | 2.4727682E 02  |
| 55 P72 | -1.3268554E 02    | -1.7910863E 02    | -3.1179416E 02 |
| 57 P73 | -1.3265898E 02    | -1.7907273E 02    | -3.1173171E 02 |
| 58 P74 | 3.4495977E 02     | 6.0193356E 01     | 4.0515313E 02  |
| 59 P77 | 3.2393128E 03     | 1.0259734E 03     | 4.2652861E 03  |
| 60 P79 | 3.1217900E 03     | 7.2424183E 02     | 3.8460318E 03  |
| 61 P80 | 3.1211644E 03     | 7.2409668E 02     | 3.8452611E 03  |
| 62 P81 | -4.1645026E 01    | -7.9592395E 01    | -1.2123742E 02 |
| 63 P82 | 3.8480406E 02     | 3.7902612E 01     | 4.2270668E 02  |
| 64 P83 | -4.8988032E 02    | 8.7875068E 02     | 3.8887036E 02  |
| 65 P84 | -1.2746322E 03    | 1.0499696E 03     | -2.2466261E 02 |
| 66 P93 | -3.3683600E 03    | -2.3214937E 03    | -5.6898537E 03 |
| 67 P94 | -8.6017305E 03    | -3.6166140E 03    | -1.2218344E 04 |
| 68 P95 | -1.1232150E 04    | -3.7481070E 03    | -1.4980257E 04 |
| 69 P96 | 4.6435202E 03     | 8.6944716E 01     | 4.7304649E 03  |
| 70 P97 | 6.1140496E 03     | 3.5994406E 02     | 6.4739935E 03  |
| 71 Q19 | 1.8339073E 03     | -2.7482190E 02    | 1.5590854E 03  |
| 72 Q20 | 1.2471589E 03     | -6.7921241E 02    | 5.6794649E 02  |
| 73 Q21 | 5.5490603E 02     | 2.8624711E 02     | 8.4115313E 02  |
| 74 Q22 | -1.6313965E 02    | 1.0261170E 02     | -6.0527948E 01 |
| 75 Q23 | 4.0700482E 02     | 2.5358861E 02     | 6.6059343E 02  |
| 76 Q24 | 8.8703728E 01     | 2.2774823E 02     | 3.1645195E 02  |
| 77 Q26 | 6.4516659E 02     | 5.2821168E 02     | 1.1733783E 03  |
| 78 Q28 | 8.1755682E 02     | 6.7549376E 02     | 1.4930506E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.0<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -8.3962017E 02    | -3.3120691E 03     | -4.1516893E 03 |
| 2 Q2   | -8.8683176E 02    | -5.0285414E 02     | -1.3896859E 03 |
| 3 Q3   | -2.7835251E 03    | -4.1093040E 02     | -3.1944555E 03 |
| 4 Q4   | -3.6783513E 03    | -2.8114889E 01     | -3.7064661E 03 |
| 5 Q5   | -4.0812647E 03    | -1.9115867E 03     | -5.9928514E 03 |
| 6 Q6   | -3.7472287E 03    | -1.6217939E 03     | -5.3690225E 03 |
| 7 Q7   | -4.5896840E 03    | -1.4771147E 03     | -6.0667986E 03 |
| 8 Q8   | -3.6757120E 03    | -1.5335684E 03     | -5.2092804E 03 |
| 9 Q9   | 9.9631234E-05     | 5.4166592E 03      | 5.4166592E 03  |
| 10 Q10 | 6.6143116E 02     | -1.4630745E 03     | -8.0164335E 02 |
| 11 Q11 | 2.0392682E 03     | 1.5571782E 03      | 3.5964465E 03  |
| 12 Q12 | 2.3717757E 03     | 3.4743143E 02      | 2.7192071E 03  |
| 13 Q13 | 3.1800604E 03     | 1.3796142E 03      | 4.5596746E 03  |
| 14 Q14 | 2.2302436E 03     | 1.3573110E 03      | 3.5875546E 03  |
| 15 Q15 | 2.6073500E 03     | 8.1718949E 02      | 3.4245394E 03  |
| 16 Q16 | 4.5988963E 03     | -5.5051709E 02     | 4.0483792E 03  |
| 17 Q17 | 3.4564029E 03     | -8.1211423E 02     | 2.6442887E 03  |
| 18 Q18 | -4.9026473E-06    | -4.1355867E 00     | -4.1355916E 00 |
| 19 Q25 | -4.4499969E 02    | -2.0185134E 03     | -2.4635131E 03 |
| 20 Q30 | -2.8985704E 03    | -2.2089568E 03     | -5.1075271E 03 |
| 21 Q31 | 1.1215240E 03     | 4.3752738E 03      | 5.4967979E 03  |
| 22 Q32 | 3.0535164E 02     | 5.0075667E 03      | 5.3129183E 03  |
| 23 Q33 | 4.9375564E 02     | 3.7180792E 02      | 8.6556356E 02  |
| 24 Q34 | -9.5394653E 02    | 5.9301525E 02      | -3.6093127E 02 |
| 25 Q35 | 7.0516936E 02     | 1.4822757E 03      | 2.1874450E 03  |
| 26 Q36 | -4.7797217E 02    | 1.2077469E 03      | 7.2977470E 02  |
| 27 Q27 | -5.1641335E 02    | -9.4578089E 02     | -1.4621942E 03 |
| 28 Q36 | -4.5461417E 02    | -7.9469135E 02     | -1.2493055E 03 |
| 29 P40 | -7.3158356E 03    | -1.6651671E 04     | -2.3967506E 04 |
| 30 P41 | -5.6233454E 03    | -4.9872969E 03     | -1.0610642E 04 |
| 31 P42 | -8.2044470E 03    | -1.5589774E 03     | -9.7634245E 03 |
| 32 P43 | -1.2441560E 04    | 1.0002914E 03      | -1.1441269E 04 |
| 33 P44 | -1.2635356E 04    | 1.0158726E 03      | -1.1619483E 04 |
| 34 P45 | -1.5021392E 04    | -2.3545403E 03     | -1.7375932E 04 |
| 35 P46 | -1.6651107E 04    | -4.0277214E 03     | -2.0678828E 04 |
| 36 P47 | -1.7925976E 04    | -4.7455153E 03     | -2.2671491E 04 |
| 37 P48 | -2.2932601E 04    | -6.8272601E 03     | -2.9759862E 04 |
| 38 P49 | -2.0720564E 04    | 1.1043513E-05      | -2.0720564E 04 |
| 39 P50 | 4.4993585E 03     | 1.3258982E 04      | 1.7758341E 04  |
| 40 P51 | -2.3853994E 03    | -2.3168248E 03     | -4.7022241E 03 |
| 41 P52 | -7.4743494E 03    | -5.3708774E 03     | -1.2845227E 04 |
| 42 P53 | -1.6421029E 04    | -1.3887579E 04     | -3.0308608E 04 |
| 43 P54 | -1.5471980E 04    | -1.3084949E 04     | -2.8556929E 04 |
| 44 P55 | -1.5256457E 04    | -5.8537735E 03     | -2.1110730E 04 |
| 45 P56 | -1.8096037E 04    | -2.4237982E 03     | -2.0519835E 04 |
| 46 P57 | -1.7247334E 04    | -2.3101218E 03     | -1.9557456E 04 |
| 47 P58 | -1.6717519E 04    | 9.6862619E 02      | -1.5808893E 04 |
| 48 P59 | -1.6810571E 04    | 3.4561646E 03      | -1.3354406E 04 |
| 49 P60 | -1.6626408E 04    | 1.5006377E-05      | -1.6626408E 04 |
| 50 P62 | 8.5884602E 02     | 1.9848475E 02      | 1.0573308E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.0<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 8.5867389E 02     | 1.9844504E 02      | 1.0571189E 03  |
| 52 P64 | 8.5516481E 01     | -7.9842802E 01     | 5.6736803E 00  |
| 53 P67 | 7.5448922E 02     | -1.0977144E 02     | 6.4471779E 02  |
| 54 P68 | 7.5433807E 02     | -1.0974946E 02     | 6.4458861E 02  |
| 55 P69 | 1.7963196E 02     | -2.8701252E 01     | 1.5093071E 02  |
| 56 P72 | -8.5719459E 01    | -4.7830688E 02     | -5.6402634E 02 |
| 57 P73 | -8.5702329E 01    | -4.7821111E 02     | -5.6391343E 02 |
| 58 P74 | 3.1041939E 02     | 6.4622294E 01      | 3.7504168E 02  |
| 59 P77 | 2.7055719E 03     | -3.9574104E 02     | 2.3098309E 03  |
| 60 P79 | 2.6787055E 03     | 6.4267163E 01      | 2.7429727E 03  |
| 61 P80 | 2.6781688E 03     | 6.4254277E 01      | 2.7424231E 03  |
| 62 P81 | -2.2883818E 01    | -5.8798329E 01     | -8.1682148E 01 |
| 63 P82 | 3.2861893E 02     | 2.1600464E 02      | 5.4462357E 02  |
| 64 P83 | -3.8862498E 02    | 3.0393402E 02      | -8.4690967E 01 |
| 65 P84 | -1.3027294E 03    | 3.2538471E 01      | -1.2701909E 03 |
| 66 P93 | -2.3443270E 03    | -2.5610262E 02     | -2.6004296E 03 |
| 67 P94 | -6.9584307E 03    | -4.5622959E 03     | -1.1520727E 04 |
| 68 P95 | -9.6041125E 03    | -6.4503073E 03     | -1.6054420E 04 |
| 69 P96 | 4.3262694E 03     | 6.3952236E 03      | 1.0721493E 04  |
| 70 P97 | 5.2111707E 03     | -1.1849407E 03     | 4.0262300E 03  |
| 71 Q19 | 1.8947985E 03     | 1.9416400E 03      | 3.8364384E 03  |
| 72 Q20 | 1.4864306E 03     | 1.8970284E 03      | 3.3834590E 03  |
| 73 Q21 | 4.4226367E 02     | -1.7758831E 03     | -1.3336195E 03 |
| 74 Q22 | -1.8831927E 02    | -2.3566760E 03     | -2.5449952E 03 |
| 75 Q23 | 3.2821687E 02     | -1.0466926E 03     | -7.1847568E 02 |
| 76 Q24 | 1.3344617E 01     | -1.2701349E 03     | -1.2567903E 03 |
| 77 Q26 | 4.4198140E 02     | -1.4228002E 03     | -9.8081878E 02 |
| 78 Q28 | 4.4515512E 02     | -3.0652328E 03     | -2.6200776E 03 |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.0<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -8.3962017E 02    | 4.5550550E 03      | 3.7154348E 03  |
| 2 Q2   | -8.8683176E 02    | 1.0632209E 03      | 1.7638920E 02  |
| 3 Q3   | -2.7835251E 03    | 1.0124299E 03      | -1.7710952E 03 |
| 4 Q4   | -3.6783513E 03    | 5.8601795E 02      | -3.0923333E 03 |
| 5 Q5   | -4.0812647E 03    | 2.9684564E 03      | -1.1128083E 03 |
| 6 Q6   | -3.7472287E 03    | 2.5112805E 03      | -1.2359482E 03 |
| 7 Q7   | -4.5896840E 03    | 2.3783830E 03      | -2.2113010E 03 |
| 8 Q8   | -3.6757120E 03    | 2.3561234E 03      | -1.3195886E 03 |
| 9 Q9   | 9.9631234E -05    | -9.3726118E 03     | -9.3726118E 03 |
| 10 Q10 | 6.6143116E 02     | 1.7285549E 03      | 2.3899861E 03  |
| 11 Q11 | 2.0392682E 03     | -2.2959960E 03     | -2.5672772E 02 |
| 12 Q12 | 2.3717757E 03     | -8.2870946E 02     | 1.5430662E 03  |
| 13 Q13 | 3.1800604E 03     | -2.1987973E 03     | 9.8126305E 02  |
| 14 Q14 | 2.2302436E 03     | -1.9902911E 03     | 2.3995251E 02  |
| 15 Q15 | 2.6073500E 03     | -1.3964080E 03     | 1.2109419E 03  |
| 16 Q16 | 4.5988963E 03     | -2.1620456E 02     | 4.3826917E 03  |
| 17 Q17 | 3.4564029E 03     | 3.3850265E 02      | 3.7949055E 03  |
| 18 Q18 | -4.9026473E -06   | 8.1002703E 00      | 8.1002654E 00  |
| 19 Q25 | -4.4499969E 02    | 2.5285840E 03      | 2.0935843E 03  |
| 20 Q30 | -2.8985704E 03    | 3.1838465E 03      | 2.8527612E 02  |
| 21 Q31 | 1.1215240E 03     | -5.5474036E 03     | -4.4258796E 03 |
| 22 Q32 | 3.0535164E 02     | -6.1896641E 03     | -5.8843125E 03 |
| 23 Q33 | 4.9375564E 02     | -4.3593706E 02     | 5.7818573E 01  |
| 24 Q34 | -9.5394653E 02    | -5.2218182E 02     | -1.4761284E 03 |
| 25 Q35 | 7.0516936E 02     | -1.8820255E 03     | -1.1768561E 03 |
| 26 Q36 | -4.7797217E 02    | -1.3832173E 03     | -1.8611895E 03 |
| 27 Q37 | -5.1641335E 02    | 1.2597603E 03      | 7.4334698E 02  |
| 28 Q38 | -4.5461417E 02    | 1.0212990E 03      | 5.6668481E 02  |
| 29 P40 | -7.3158356E 03    | 2.2120702E 04      | 1.4804866E 04  |
| 30 P41 | -5.6233454E 03    | 7.8476681E 03      | 2.2243226E 03  |
| 31 P42 | -8.2044470E 03    | 3.8824083E 03      | -4.3220388E 03 |
| 32 P43 | -1.2441560E 04    | 1.3057995E 03      | -1.1135761E 04 |
| 33 P44 | -1.2635356E 04    | 1.3261390E 03      | -1.1309217E 04 |
| 34 P45 | -1.5021392E 04    | 5.6165830E 03      | -9.4048092E 03 |
| 35 P46 | -1.6651107E 04    | 7.7474763E 03      | -8.9036306E 03 |
| 36 P47 | -1.7925976E 04    | 8.6116629E 03      | -9.3143128E 03 |
| 37 P48 | -2.2932601E 04    | 1.1813419E 04      | -1.1119183E 04 |
| 38 P49 | -2.0720564E 04    | -1.1620211E -05    | -2.0720564E 04 |
| 39 P50 | 4.4993585E 03     | -1.6723132E 04     | -1.2223774E 04 |
| 40 P51 | -2.3853994E 03    | 3.6597497E 03      | 1.2743503E 03  |
| 41 P52 | -7.4743494E 03    | 8.1406331E 03      | 6.6628369E 02  |
| 42 P53 | -1.6421029E 04    | 1.9938421E 04      | 3.5173921E 03  |
| 43 P54 | -1.5471980E 04    | 1.8786084E 04      | 3.3141042E 03  |
| 44 P55 | -1.5256957E 04    | 9.7909447E 03      | -5.4660124E 03 |
| 45 P56 | -1.8096037E 04    | 6.0287951E 03      | -1.2067242E 04 |
| 46 P57 | -1.7247334E 04    | 5.7460443E 03      | -1.1501290E 04 |
| 47 P58 | -1.6777519E 04    | 1.8289369E 03      | -1.4948582E 04 |
| 48 P59 | -1.6810571E 04    | -1.1282955E 03     | -1.7938866E 04 |
| 49 P60 | -1.6626408E 04    | -1.6238353E -05    | -1.6626408E 04 |
| 50 P62 | 8.5884602E 02     | -3.8876711E 02     | 4.7007891E 02  |



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| PT     | S2.0<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 8.5867389E 02     | -3.8868926E 02     | 4.6998463E 02  |
| 52 P64 | 8.5516481E 01     | 8.3960884E 01      | 1.6947736E 02  |
| 53 P67 | 7.5448922E 02     | 7.0857104E 01      | 8.2534631E 02  |
| 54 P68 | 7.5433807E 02     | 7.0842934E 01      | 8.2518101E 02  |
| 55 P69 | 1.7963196E 02     | 1.2005733E 01      | 1.9163769E 02  |
| 56 P72 | -8.5719459E 01    | 6.7073250E 02      | 5.8501304E 02  |
| 57 P73 | -8.5702329E 01    | 6.7059817E 02      | 5.8489585E 02  |
| 58 P74 | 3.1041939E 02     | -1.2197190E 02     | 1.8844749E 02  |
| 59 P77 | 2.7055719E 03     | -3.5666411E 01     | 2.6699056E 03  |
| 60 P79 | 2.6787055E 03     | -5.4547663E 02     | 2.1332289E 03  |
| 61 P80 | 2.6781688E 03     | -5.4536729E 02     | 2.1328015E 03  |
| 62 P81 | -2.2883818E 01    | 9.4896653E 01      | 7.2012835E 01  |
| 63 P82 | 3.2861893E 02     | -3.3272498E 02     | -4.1060524E 00 |
| 64 P83 | -3.8862498E 02    | -2.0669116E 02     | -5.9531614E 02 |
| 65 P84 | -1.3027294E 03    | 6.4912245E 01      | -1.2378172E 03 |
| 66 P93 | -2.3443270E 03    | 1.2520961E 03      | -1.0922309E 03 |
| 67 P94 | -6.9584307E 03    | 7.5173919E 03      | 5.5896118E 02  |
| 68 P95 | -9.6041125E 03    | 1.0071147E 04      | 4.6703479E 02  |
| 69 P96 | 4.3262694E 03     | -1.0715749E 04     | -6.3894796E 03 |
| 70 P97 | 5.2111707E 03     | 4.3304182E 02      | 5.6442125E 03  |
| 71 Q19 | 1.8947985E 03     | -2.5735691E 03     | -6.7877066E 02 |
| 72 Q20 | 1.4864306E 03     | -2.3554614E 03     | -8.6903089E 02 |
| 73 Q21 | 4.4226367E 02     | 2.1404620E 03      | 2.5827257E 03  |
| 74 Q22 | -1.8831927E 02    | 2.9889966E 03      | 2.8006774E 03  |
| 75 Q23 | 3.2821687E 02     | 1.2247794E 03      | 1.5529963E 03  |
| 76 Q24 | 1.3344617E 01     | 1.5312062E 03      | 1.5445508E 03  |
| 77 Q26 | 4.4198140E 02     | 1.6084707E 03      | 2.0504521E 03  |
| 78 Q28 | 4.4515512E 02     | 3.6251301E 03      | 4.0702852E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.0<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -8.3962017E 02    | -2.5031859E 03     | -3.3428060E 03 |
| 2 Q2   | -8.8683176E 02    | -1.4323986E 03     | -2.3192303E 03 |
| 3 Q3   | -2.7835211E 03    | -1.4703533E 03     | -4.2538785E 03 |
| 4 Q4   | -3.6783513E 03    | -1.3354284E 03     | -5.0137797E 03 |
| 5 Q5   | -4.0812647E 03    | -1.7149262E 03     | -5.7961910E 03 |
| 6 Q6   | -3.7472287E 03    | -1.7653074E 03     | -5.5125361E 03 |
| 7 Q7   | -4.5896840E 03    | -1.7564388E 01     | -4.6072483E 03 |
| 8 Q8   | -3.6757120E 03    | -9.7107031E 01     | -3.7728190E 03 |
| 9 Q9   | 9.9631234E-05     | 4.8487053E 03      | 4.8487054E 03  |
| 10 Q10 | 6.6143116E 02     | -3.7183302E 02     | 2.8959814E 02  |
| 11 Q11 | 2.0392682E 03     | 1.3165188E 03      | 3.3557871E 03  |
| 12 Q12 | 2.3717757E 03     | 1.0272346E 03      | 3.3990103E 03  |
| 13 Q13 | 3.1800604E 03     | 1.5629779E 03      | 4.7430382E 03  |
| 14 Q14 | 2.2302436E 03     | 1.2087339E 03      | 3.4389775E 03  |
| 15 Q15 | 2.6073500E 03     | 1.2392043E 03      | 3.8465543E 03  |
| 16 Q16 | 4.5988963E 03     | 8.8503616E 01      | 4.6873999E 03  |
| 17 Q17 | 3.4564029E 03     | -4.3509775E 01     | 3.4128931E 03  |
| 18 Q18 | -4.9026473E-06    | -7.8014122E 00     | -7.8014171E 00 |
| 19 Q25 | -4.4499969E 02    | -7.8055830E 02     | -1.2255580E 03 |
| 20 Q30 | -2.8985704E 03    | -1.5225197E 03     | -4.4210901E 03 |
| 21 Q31 | 1.1215240E 03     | 1.6819829E 03      | 2.8035070E 03  |
| 22 Q32 | 3.0535164E 02     | 1.5983441E 03      | 1.9036958E 03  |
| 23 Q33 | 4.9375564E 02     | 1.0665354E 01      | 5.0442099E 02  |
| 24 Q34 | -9.5394653E 02    | -3.1520603E 02     | -1.2691526E 03 |
| 25 Q35 | 7.0516936E 02     | 5.5668198E 02      | 1.2618513E 03  |
| 26 Q36 | -4.7797217E 02    | 1.5705190E 02      | -3.2092026E 02 |
| 27 Q37 | -5.1641335E 02    | -5.5331749E 02     | -1.0697308E 03 |
| 28 Q38 | -4.5461417E 02    | -2.7183803E 02     | -7.2645220E 02 |
| 29 P40 | -7.3158356E 03    | -9.1738681E 03     | -1.6489704E 04 |
| 30 P41 | -5.6233454E 03    | -6.0354782E 03     | -1.1658823E 04 |
| 31 P42 | -8.2044470E 03    | -5.6179007E 03     | -1.3822348E 04 |
| 32 P43 | -1.2441560E 04    | -6.1278700E 03     | -1.8569430E 04 |
| 33 P44 | -1.2635356E 04    | -6.2233205E 03     | -1.8858676E 04 |
| 34 P45 | -1.5021392E 04    | -6.9289624E 03     | -2.1950355E 04 |
| 35 P46 | -1.6651107E 04    | -7.7311583E 03     | -2.4382265E 04 |
| 36 P47 | -1.7925976E 04    | -5.9648649E 03     | -2.3890840E 04 |
| 37 P48 | -2.2932601E 04    | -6.1114008E 03     | -2.9044002E 04 |
| 38 P49 | -2.0720564E 04    | 1.7775480E-05      | -2.0720564E 04 |
| 39 P50 | 4.4993585E 03     | 4.5220796E 03      | 9.0214380E 03  |
| 40 P51 | -2.3853994E 03    | -2.9307628E 03     | -5.3161622E 03 |
| 41 P52 | -7.4743494E 03    | -5.4445412E 03     | -1.2918891E 04 |
| 42 P53 | -1.6421029E 04    | -1.1109028E 04     | -2.7530057E 04 |
| 43 P54 | -1.5471980E 04    | -1.0466984E 04     | -2.5938964E 04 |
| 44 P55 | -1.5256957E 04    | -7.7346618E 03     | -2.2991619E 04 |
| 45 P56 | -1.8096037E 04    | -7.6943866E 03     | -2.5790423E 04 |
| 46 P57 | -1.7247334E 04    | -7.3335200E 03     | -2.4580854E 04 |
| 47 P58 | -1.6777519E 04    | -4.1087641E 03     | -2.0886283E 04 |
| 48 P59 | -1.6810571E 04    | -2.1611973E 03     | -1.8971768E 04 |
| 49 P60 | -1.6626408E 04    | 3.5571646E-06      | -1.6626408E 04 |
| 50 P62 | 8.5884602E 02     | 3.7442359E 02      | 1.2332696E 03  |

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| PT     | S2.0<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 8.5867389E 02     | 3.7434855E 02      | 1.2330224E 03  |
| 52 P64 | 8.5516481E 01     | 4.7016125E 00      | 9.0218095E 01  |
| 53 P67 | 7.5448922E 02     | 9.7279470E 01      | 8.5176868E 02  |
| 54 P68 | 7.5433807E 02     | 9.7259961E 01      | 8.5159802E 02  |
| 55 P69 | 1.7963196E 02     | 4.0716000E 01      | 2.2034796E 02  |
| 56 P72 | -8.5719459E 01    | -4.4807527E 02     | -5.3379473E 02 |
| 57 P73 | -8.5702329E 01    | -4.4798551E 02     | -5.3368783E 02 |
| 58 P74 | 3.1041939E 02     | 1.0306176E 02      | 4.1348115E 02  |
| 59 P77 | 2.7055719E 03     | 9.8675615E 02      | 3.6923281E 03  |
| 60 P79 | 2.6787055E 03     | 8.7407047E 02      | 3.5527760E 03  |
| 61 P80 | 2.6781688E 03     | 8.7389532E 02      | 3.5520641E 03  |
| 62 P81 | -2.2883818E 01    | -1.2041926E 02     | -1.4330308E 02 |
| 63 P82 | 3.2861893E 02     | 1.4019364E 02      | 4.6881256E 02  |
| 64 P83 | -3.8862498E 02    | 1.1802201E 03      | 7.9159512E 02  |
| 65 P84 | -1.3027294E 03    | 1.2547048E 03      | -4.8024628E 01 |
| 66 P93 | -2.3443270E 03    | -2.7129212E 03     | -5.0572481E 03 |
| 67 P94 | -6.9584307E 03    | -6.3973515E 03     | -1.3355782E 04 |
| 68 P95 | -9.6041125E 03    | -7.5678766E 03     | -1.7171989E 04 |
| 69 P96 | 4.3262694E 03     | 4.2232257E 03      | 8.5494951E 03  |
| 70 P97 | 5.2111707E 03     | 8.8624148E 00      | 5.2200331E 03  |
| 71 Q19 | 1.8947985E 03     | 7.9793696E 02      | 2.6927354E 03  |
| 72 Q20 | 1.4864306E 03     | 3.2536211E 02      | 1.8117927E 03  |
| 73 Q21 | 4.4226367E 02     | -5.0380396E 02     | -6.1540287E 01 |
| 74 Q22 | -1.8831927E 02    | -1.0106899E 03     | -1.1990091E 03 |
| 75 Q23 | 3.2821687E 02     | -1.8515389E 02     | 1.4306299E 02  |
| 76 Q24 | 1.3344617E 01     | -3.3480284E 02     | -3.2145822E 02 |
| 77 Q26 | 4.4198140E 02     | -8.1632422E 01     | 3.6034898E 02  |
| 78 Q28 | 4.4515512E 02     | -7.9443256E 02     | -3.4927744E 02 |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.0<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -8.3962017E 02    | 3.0876348E 03      | 2.2480147E 03  |
| 2 Q2   | -8.8683176E 02    | 1.8308167E 03      | 9.4398494E 02  |
| 3 Q3   | -2.7835251E 03    | 1.8280481E 03      | -9.5547706E 02 |
| 4 Q4   | -3.6783513E 03    | 1.7088732E 03      | -1.9694781E 03 |
| 5 Q5   | -4.0812647E 03    | 2.2751255E 03      | -1.8061392E 03 |
| 6 Q6   | -3.7472287E 03    | 1.7605984E 03      | -1.9866304E 03 |
| 7 Q7   | -4.5896840E 03    | 6.6065323E 01      | -4.5236187E 03 |
| 8 Q8   | -3.6757120E 03    | 1.7282857E 02      | -3.5028835E 03 |
| 9 Q9   | 9.9631234E-05     | -5.8351758E 03     | -5.8351757E 03 |
| 10 Q10 | 6.6143116E 02     | 4.9810010E 02      | 1.1595313E 03  |
| 11 Q11 | 2.0392682E 03     | -1.5362794E 03     | 5.0298882E 02  |
| 12 Q12 | 2.3717757E 03     | -1.1891769E 03     | 1.1825987E 03  |
| 13 Q13 | 3.1800604E 03     | -1.8357991E 03     | 1.3432613E 03  |
| 14 Q14 | 2.2302436E 03     | -1.3597966E 03     | 8.7044697E 02  |
| 15 Q15 | 2.6073500E 03     | -1.3783405E 03     | 1.2290095E 03  |
| 16 Q16 | 4.5988963E 03     | -3.2201661E 02     | 4.2768797E 03  |
| 17 Q17 | 3.4564029E 03     | -8.8492782E 01     | 3.3679101E 03  |
| 18 Q18 | -4.9026473E-06    | 9.3153554E 00      | 9.3153505E 00  |
| 19 Q25 | -4.4499969E 02    | 9.7969398E 02      | 5.3469429E 02  |
| 20 Q30 | -2.8985704E 03    | 1.8281586E 03      | -1.0704117E 03 |
| 21 Q31 | 1.1215240E 03     | -2.0882689E 03     | -9.6674490E 02 |
| 22 Q32 | 3.0535164E 02     | -2.0028073E 03     | -1.6974557E 03 |
| 23 Q33 | 4.9375564E 02     | -5.7489232E 01     | 4.3626641E 02  |
| 24 Q34 | -9.5394653E 02    | 3.3585235E 02      | -6.1809418E 02 |
| 25 Q35 | 7.0516936E 02     | -6.9102185E 02     | 1.4147507E 01  |
| 26 Q36 | -4.7797217E 02    | -1.9281637E 02     | -6.7078853E 02 |
| 27 Q37 | -5.1641335E 02    | 6.8698012E 02      | 1.7056676E 02  |
| 28 Q38 | -4.5461417E 02    | 3.6190852E 02      | -9.2705650E 01 |
| 29 P40 | -7.3158356E 03    | 1.1024303E 04      | 3.7084671E 03  |
| 30 P41 | -5.6233454E 03    | 7.3429535E 03      | 1.7196081E 03  |
| 31 P42 | -8.2044470E 03    | 6.8253068E 03      | -1.3791403E 03 |
| 32 P43 | -1.2441560E 04    | 7.5228351E 03      | -4.9187252E 03 |
| 33 P44 | -1.2635356E 04    | 7.6400140E 03      | -4.9953419E 03 |
| 34 P45 | -1.5021392E 04    | 8.7763696E 03      | -6.2450227E 03 |
| 35 P46 | -1.6651107E 04    | 9.1409242E 03      | -7.5101826E 03 |
| 36 P47 | -1.7925976E 04    | 7.1030946E 03      | -1.0822881E 04 |
| 37 P48 | -2.2932601E 04    | 7.3547673E 03      | -1.5577834E 04 |
| 38 P49 | -2.0720564E 04    | -1.8047218E-05     | -2.0720564E 04 |
| 39 P50 | 4.4993585E 03     | -5.3684951E 03     | -8.6913660E 02 |
| 40 P51 | -2.3853994E 03    | 3.6074719E 03      | 1.2220725E 03  |
| 41 P52 | -7.4743494E 03    | 6.6197447E 03      | -8.5460473E 02 |
| 42 P53 | -1.6421029E 04    | 1.3413792E 04      | -3.0072367E 03 |
| 43 P54 | -1.5471980E 04    | 1.2638544E 04      | -2.8334355E 03 |
| 44 P55 | -1.5256957E 04    | 9.1638322E 03      | -6.0911249E 03 |
| 45 P56 | -1.8096037E 04    | 8.9595392E 03      | -9.1364979E 03 |
| 46 P57 | -1.7247334E 04    | 8.5393368E 03      | -8.7079970E 03 |
| 47 P58 | -1.6777519E 04    | 5.0669067E 03      | -1.1710612E 04 |
| 48 P59 | -1.6810571E 04    | 2.9271170E 03      | -1.3883454E 04 |
| 49 P60 | -1.6626408E 04    | -4.1376529E-06     | -1.6626408E 04 |
| 50 P62 | 8.5884602E 02     | -4.4708428E 02     | 4.1176174E 02  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.0<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 8.5867389E 02     | -4.4699466E 02     | 4.1167923E 02  |
| 52 P64 | 8.5516481E 01     | -3.8459961E 00     | 8.1670486E 01  |
| 53 P67 | 7.5448922E 02     | -1.1090992E 02     | 6.4357930E 02  |
| 54 P68 | 7.5433807E 02     | -1.1088768E 02     | 6.4345039E 02  |
| 55 P69 | 1.7963196E 02     | -4.9021001E 01     | 1.3061096E 02  |
| 56 P72 | -8.5719459E 01    | 5.2714420E 02      | 4.4142474E 02  |
| 57 P73 | -8.5702329E 01    | 5.2703859E 02      | 4.4133627E 02  |
| 58 P74 | 3.1041939E 02     | -1.2850037E 02     | 1.8191902E 02  |
| 59 P77 | 2.7055719E 03     | -1.2285213E 03     | 1.4770506E 03  |
| 60 P79 | 2.6787055E 03     | -1.1121651E 03     | 1.5665404E 03  |
| 61 P80 | 2.6781688E 03     | -1.1119423E 03     | 1.5662265E 03  |
| 62 P81 | -2.2883818E 01    | 1.3863659E 02      | 1.1575277E 02  |
| 63 P82 | 3.2861893E 02     | -2.0138631E 02     | 1.2723261E 02  |
| 64 P83 | -3.8862498E 02    | -1.1343993E 03     | -1.5230243E 03 |
| 65 P84 | -1.3027294E 03    | -1.2087861E 03     | -2.5115155E 03 |
| 66 P93 | -2.3443270E 03    | 3.3307209E 03      | 9.8639392E 02  |
| 67 P94 | -6.9584307E 03    | 7.8088624E 03      | 8.5043169E 02  |
| 68 P95 | -9.6041125E 03    | 9.1660368E 03      | -4.3807568E 02 |
| 69 P96 | 4.3262694E 03     | -5.1483127E 03     | -8.2204332E 02 |
| 70 P97 | 5.2111707E 03     | -2.2233076E 02     | 4.9888400E 03  |
| 71 Q19 | 1.8947985E 03     | -8.8680310E 02     | 1.0079954E 03  |
| 72 Q20 | 1.4864306E 03     | -3.0661120E 02     | 1.1798193E 03  |
| 73 Q21 | 4.4226367E 02     | 6.6924742E 02      | 1.1115111E 03  |
| 74 Q22 | -1.8831927E 02    | 1.2854614E 03      | 1.0971422E 03  |
| 75 Q23 | 3.2821687E 02     | 2.7689917E 02      | 6.0511604E 02  |
| 76 Q24 | 1.3344617E 01     | 4.5163029E 02      | 4.6497491E 02  |
| 77 Q26 | 4.4198140E 02     | 1.3317118E 02      | 5.7515258E 02  |
| 78 Q28 | 4.4515512E 02     | 9.0825347E 02      | 1.3534086E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|-------------------|----------------|
| 1 Q1   | -8.3962017E 02    | -7.9940501E 02    | -1.6390252E 03 |
| 2 Q2   | -8.8683176E 02    | -1.1266675E 03    | -2.0134993E 03 |
| 3 Q3   | -2.7835251E 04    | -1.1445069E 03    | -3.9280320E 03 |
| 4 Q4   | -3.6783513E 03    | -1.2134820E 03    | -4.8918332E 03 |
| 5 Q5   | -4.0812647E 03    | -7.4342105E 02    | -4.8246858E 03 |
| 6 Q6   | -3.7472287E 03    | -4.8989122E 02    | -4.2371199E 03 |
| 7 Q7   | -4.5876840E 03    | 8.9265571E 02     | -3.6970283E 03 |
| 8 Q8   | -3.6757120E 03    | 7.9325067E 02     | -2.8824613E 03 |
| 9 Q9   | 9.9631234E-05     | 1.2043389E 03     | 1.2043390E 03  |
| 10 Q10 | 6.6143116E 02     | 2.6700963E 02     | 9.2844079E 02  |
| 11 Q11 | 2.0392682E 03     | 3.8581622E 02     | 2.4250844E 03  |
| 12 Q12 | 2.3717757E 03     | 6.7664322E 02     | 3.0484189E 03  |
| 13 Q13 | 3.1800604E 03     | 6.7901831E 02     | 3.8590787E 03  |
| 14 Q14 | 2.2302436E 03     | 3.5823226E 02     | 2.5884758E 03  |
| 15 Q15 | 2.6073500E 03     | 6.1060343E 02     | 3.2179534E 03  |
| 16 Q16 | 4.5988963E 03     | 1.8571926E 02     | 4.7846155E 03  |
| 17 Q17 | 3.4564029E 03     | 2.0924267E 02     | 3.6656455E 03  |
| 18 Q18 | -4.9026473E-06    | -4.6593548E 00    | -4.6593597E 00 |
| 19 Q25 | -4.4479969E 02    | 1.8205785E 02     | -2.6294184E 02 |
| 20 Q30 | -2.8985704E 03    | -2.7907583E 02    | -3.1776462E 03 |
| 21 Q31 | 1.1215240E 03     | -4.4243557E 02    | 6.7908847E 02  |
| 22 Q32 | 3.0535164E 02     | -7.7071403E 02    | -4.6536238E 02 |
| 23 Q33 | 4.9375564E 02     | -1.2505038E 02    | 3.6870526E 02  |
| 24 Q34 | -9.5394653E 02    | -4.9245358E 02    | -1.4464001E 03 |
| 25 Q35 | 7.0516936E 02     | -1.6488598E 02    | 5.4028338E 02  |
| 26 Q36 | -4.7797217E 02    | -3.8793389E 02    | -8.6590605E 02 |
| 27 Q37 | -5.1641335E 02    | -7.9698614E 01    | -5.9611197E 02 |
| 28 Q38 | -4.5461417E 02    | 1.0056999E 02     | -3.5404418E 02 |
| 29 P40 | -7.3158356E 03    | -5.1961792E 02    | -7.8354535E 03 |
| 30 P41 | -5.6233454E 03    | -3.0904688E 03    | -8.7138141E 03 |
| 31 P42 | -8.2044470E 03    | -4.2323309E 03    | -1.2436778E 04 |
| 32 P43 | -1.2441560E 04    | -5.8497375E 03    | -1.8291298E 04 |
| 33 P44 | -1.2635356E 04    | -5.9408558E 03    | -1.8576212E 04 |
| 34 P45 | -1.5021392E 04    | -5.1930998E 03    | -2.0214492E 04 |
| 35 P46 | -1.6651107E 04    | -4.6524388E 03    | -2.1303546E 04 |
| 36 P47 | -1.7925976E 04    | -2.5816854E 03    | -2.0507661E 04 |
| 37 P48 | -2.2932601E 04    | -1.5179719E 03    | -2.4450573E 04 |
| 38 P49 | -2.0720564E 04    | 1.0658156E-05     | -2.0720564E 04 |
| 39 P50 | 4.4993585E 03     | -2.1187672E 03    | 2.3805913E 03  |
| 40 P51 | -2.5853974E 03    | -1.5963292E 03    | -3.9817286E 03 |
| 41 P52 | -7.4743494E 04    | -2.3612185E 03    | -9.8355680E 03 |
| 42 P53 | -1.6421079E 04    | -3.4124774E 03    | -1.9833526E 04 |
| 43 P54 | -1.5471980E 04    | -3.2152731E 03    | -1.8687253E 04 |
| 44 P55 | -1.5256957E 04    | -3.8574635E 03    | -1.9114440E 04 |
| 45 P56 | -1.8776037E 04    | -5.1836280E 03    | -2.3279665E 04 |
| 46 P57 | -1.7267334E 04    | -4.9405161E 03    | -2.2187850E 04 |
| 47 P58 | -1.6777519E 04    | -3.5602529E 03    | -2.0337771E 04 |
| 48 P59 | -1.6810571E 04    | -2.9262906E 03    | -1.9736861E 04 |
| 49 P60 | -1.6626408E 04    | -2.9655563E-06    | -1.6626408E 04 |
| 50 P62 | 8.5884602E 02     | 2.2362262E 02     | 1.0824686E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S2.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|-------------------|----------------|
| 51 P63 | 8.5867389E 02     | 2.2357778E 02     | 1.0822517E 03  |
| 52 P64 | 8.5516481E 01     | 3.6712172E 01     | 1.2222865E 02  |
| 53 P67 | 7.5448922E 02     | 1.2213566E 02     | 8.7662487E 02  |
| 54 P68 | 7.5433807E 02     | 1.2211119E 02     | 8.7644925E 02  |
| 55 P69 | 1.7963196E 02     | 4.6289421E 01     | 2.2592138E 02  |
| 56 P72 | -8.5719459E 01    | -1.7910863E 02    | -2.6482809E 02 |
| 57 P73 | -8.5702329E 01    | -1.7907273E 02    | -2.6477506E 02 |
| 58 P74 | 3.1041939E 02     | 6.0193356E 01     | 3.7061275E 02  |
| 59 P77 | 2.7055719E 03     | 1.0259734E 03     | 3.7315454E 03  |
| 60 P79 | 2.6787055E 03     | 7.2424183E 02     | 3.4029474E 03  |
| 61 P80 | 2.6781688E 03     | 7.2409668E 02     | 3.4022655E 03  |
| 62 P81 | -2.2883818E 01    | -7.9592395E 01    | -1.0247621E 02 |
| 63 P82 | 3.2861893E 02     | 3.7902612E 01     | 3.6652154E 02  |
| 64 P83 | -3.8862498E 02    | 8.7875068E 02     | 4.9012570E 02  |
| 65 P84 | -1.3027294E 03    | 1.0499696E 03     | -2.5275986E 02 |
| 66 P93 | -2.3443270E 03    | -2.3214937E 03    | -4.6658208E 03 |
| 67 P94 | -6.9584307E 03    | -3.6166140E 03    | -1.0575045E 04 |
| 68 P95 | -2.6041125E 03    | -3.7481070E 03    | -1.3352219E 04 |
| 69 P96 | 4.3262694E 03     | 8.6944716E 01     | 4.4132141E 03  |
| 70 P97 | 5.2111707E 03     | 3.5994406E 02     | 5.5711148E 03  |
| 71 Q19 | 1.8947985E 03     | -2.7482190E 02    | 1.6199766E 03  |
| 72 Q20 | 1.4864306E 03     | -6.7921241E 02    | 8.0721815E 02  |
| 73 Q21 | 4.4226367E 02     | 2.8624711E 02     | 7.2851079E 02  |
| 74 Q22 | -1.8831927E 02    | 1.0261170E 02     | -8.5707573E 01 |
| 75 Q23 | 3.2821687E 02     | 2.5358861E 02     | 5.8180549E 02  |
| 76 Q24 | 1.3344617E 01     | 2.2774823E 02     | 2.4109284E 02  |
| 77 Q26 | 4.4198140E 02     | 5.2821168E 02     | 9.7019308E 02  |
| 78 Q28 | 4.4515512E 02     | 6.7549376E 02     | 1.1206489E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S1.0<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -1.5914727E 02    | -3.3120691E 03     | -3.4712164E 03 |
| 2 Q2   | 7.7297158E 01     | -5.0285414E 02     | -4.2555699E 02 |
| 3 Q3   | -1.8202268E 03    | -4.1093040E 02     | -2.2311572E 03 |
| 4 Q4   | -2.5013989E 03    | -2.8114889E 01     | -2.5295137E 03 |
| 5 Q5   | -2.9863518E 03    | -1.9115867E 03     | -4.8979384E 03 |
| 6 Q6   | -2.8656292E 03    | -1.6217939E 03     | -4.4874230E 03 |
| 7 Q7   | -3.9508931E 03    | -1.4771147E 03     | -5.4280077E 03 |
| 8 Q8   | -3.1354479E 03    | -1.5335684E 03     | -4.6690163E 03 |
| 9 Q9   | 8.0289140E-05     | 5.4166592E 03      | 5.4166592E 03  |
| 10 Q10 | 4.0464031E 02     | -1.4630745E 03     | -1.0584342E 03 |
| 11 Q11 | 1.6581687E 03     | 1.5571782E 03      | 3.2153470E 03  |
| 12 Q12 | 1.7695593E 03     | 3.4743143E 02      | 2.1169907E 03  |
| 13 Q13 | 2.5542569E 03     | 1.3796142E 03      | 3.9338712E 03  |
| 14 Q14 | 1.9610508E 03     | 1.3573110E 03      | 3.3183618E 03  |
| 15 Q15 | 2.0433993E 03     | 8.1718949E 02      | 2.8605888E 03  |
| 16 Q16 | 3.1393607E 03     | -5.5051709E 02     | 2.5888436E 03  |
| 17 Q17 | 2.2568946E 03     | -8.1211423E 02     | 1.4447803E 03  |
| 18 Q18 | -3.1556160E-06    | -4.1355867E 00     | -4.1355898E 00 |
| 19 Q25 | -5.5075949E 02    | -2.0185134E 03     | -2.5692729E 03 |
| 20 Q30 | -2.4707669E 03    | -2.2089568E 03     | -4.6797237E 03 |
| 21 Q31 | 1.3903622E 03     | 4.3752738E 03      | 5.7656360E 03  |
| 22 Q32 | 8.5486579E 02     | 5.0075667E 03      | 5.8624325E 03  |
| 23 Q33 | 5.0903254E 02     | 3.7180792E 02      | 8.8084046E 02  |
| 24 Q34 | -5.9701378E 02    | 5.9301525E 02      | -3.9985275E 00 |
| 25 Q35 | 7.8800380E 02     | 1.4822757E 03      | 2.2702794E 03  |
| 26 Q36 | -1.3658335E 02    | 1.2077469E 03      | 1.0711635E 03  |
| 27 Q37 | -4.2201895E 02    | -9.4578089E 02     | -1.3677998E 03 |
| 28 Q38 | -4.4643229E 02    | -7.9469135E 02     | -1.2411236E 03 |
| 29 P40 | -6.5683174E 03    | -1.6651671E 04     | -2.3219988E 04 |
| 30 P41 | -2.8965977E 03    | -4.9872969E 03     | -7.8838946E 03 |
| 31 P42 | -4.6358058E 03    | -1.5589774E 03     | -6.1947832E 03 |
| 32 P43 | -7.3363006E 03    | 1.0002914E 03      | -6.3360093E 03 |
| 33 P44 | -7.4505764E 03    | 1.0158726E 03      | -6.4347018E 03 |
| 34 P45 | -9.7796764E 03    | -2.3545403E 03     | -1.2134217E 04 |
| 35 P46 | -1.1424547E 04    | -4.0277214E 03     | -1.5452269E 04 |
| 36 P47 | -1.3193971E 04    | -4.7455153E 03     | -1.7939487E 04 |
| 37 P48 | -1.7459263E 04    | -6.8272601E 03     | -2.4286523E 04 |
| 38 P49 | -1.5775174E 04    | 1.1043513E-05      | -1.5775174E 04 |
| 39 P50 | 5.9977903E 03     | 1.3258982E 04      | 1.9256773E 04  |
| 40 P51 | -9.8832004E 02    | -2.3168248E 03     | -3.3051448E 03 |
| 41 P52 | -5.2108807E 03    | -5.3708774E 03     | -1.0581758E 04 |
| 42 P53 | -1.3033299E 04    | -1.1887579E 04     | -2.6920878E 04 |
| 43 P54 | -1.2280042E 04    | -1.3084949E 04     | -2.5364991E 04 |
| 44 P55 | -1.1528725E 04    | -5.8537735E 03     | -1.7382492E 04 |
| 45 P56 | -1.3025943E 04    | -2.4237982E 03     | -1.5449741E 04 |
| 46 P57 | -1.2415027E 04    | -2.3101218E 03     | -1.4725148E 04 |
| 47 P58 | -1.1510644E 04    | 9.6862619E 02      | -1.0541818E 04 |
| 48 P59 | -1.1064817E 04    | 3.4561646E 03      | -7.5886519E 03 |
| 49 P60 | -1.0923819E 04    | 1.5006377E-05      | -1.0923819E 04 |
| 50 P62 | 6.5526881E 02     | 1.9848475E 02      | 8.5375355E 02  |



## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S1.0<br>SYMMETRIC | +15.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 6.5513747E 02     | 1.9844504E 02      | 8.5358250E 02  |
| 52 P64 | 5.4411449E 01     | -7.9842802E 01     | -2.5431353E 01 |
| 53 P67 | 6.5855336E 02     | -1.0977144E 02     | 5.4878193E 02  |
| 54 P68 | 6.5842145E 02     | -1.0974946E 02     | 5.4867200E 02  |
| 55 P69 | 1.3686958E 02     | -2.8701252E 01     | 1.0816833E 02  |
| 56 P72 | 8.3032820E 00     | -4.7830688E 02     | -4.6999760E 02 |
| 57 P73 | 8.3075938E 00     | -4.7821111E 02     | -4.6990352E 02 |
| 58 P74 | 2.4125216E 02     | 6.4622294E 01      | 3.0587446E 02  |
| 59 P77 | 1.6367910E 03     | -3.9574104E 02     | 1.2410500E 03  |
| 60 P79 | 1.7914267E 03     | 6.4267163E 01      | 1.8556938E 03  |
| 61 P80 | 1.7910677E 03     | 6.4254277E 01      | 1.8553220E 03  |
| 62 P81 | 1.4674313E 01     | -5.8798329E 01     | -4.4124016E 01 |
| 63 P82 | 2.1609488E 02     | 2.1600464E 02      | 4.3209952E 02  |
| 64 P83 | -1.8546834E 02    | 3.0393402E 02      | 1.1846568E 02  |
| 65 P84 | -1.3585731E 03    | 3.2538471E 01      | -1.3260346E 03 |
| 66 P93 | -2.9393758E 02    | -2.5610262E 02     | -5.5004020E 02 |
| 67 P94 | -3.6679765E 03    | -4.5622959E 03     | -8.2302723E 03 |
| 68 P95 | -6.3441926E 03    | -6.4503073E 03     | -1.2794500E 04 |
| 69 P96 | 3.6903849E 03     | 6.3952236E 03      | 1.0085608E 04  |
| 70 P97 | 3.4026887E 03     | -1.1849407E 03     | 2.2177480E 03  |
| 71 Q19 | 2.0166235E 03     | 1.9416400E 03      | 3.9582635E 03  |
| 72 Q20 | 1.9654213E 03     | 1.8970284E 03      | 3.8624498E 03  |
| 73 Q21 | 2.1672461E 02     | -1.7758831E 03     | -1.5591585E 03 |
| 74 Q22 | -2.3871732E 02    | -2.3566760E 03     | -2.5953933E 03 |
| 75 Q23 | 1.7046590E 02     | -1.0466926E 03     | -8.7622665E 02 |
| 76 Q24 | -1.3753790E 02    | -1.2701349E 03     | -1.4076728E 03 |
| 77 Q26 | 3.5153939E 01     | -1.4228002E 03     | -1.3876462E 03 |
| 78 Q28 | -3.0053277E 02    | -3.0652328E 03     | -3.3657655E 03 |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | 51.0<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -1.5914727E 02    | 4.5550550E 03      | 4.3959078E 03  |
| 2 Q2   | 1.7297158E 01     | 1.0632209E 03      | 1.1405181E 03  |
| 3 Q3   | -1.8202268E 03    | 1.0124299E 03      | -8.0779687E 02 |
| 4 Q4   | -2.5013989E 03    | 5.8601795E 02      | -1.9153809E 03 |
| 5 Q5   | -2.9863518E 03    | 2.9684564E 03      | -1.7895325E 01 |
| 6 Q6   | -2.8656292E 03    | 2.5112805E 03      | -3.5434869E 02 |
| 7 Q7   | -3.9508931E 03    | 2.3783830E 03      | -1.5725101E 03 |
| 8 Q8   | -3.1354479E 03    | 2.3561234E 03      | -7.7932458E 02 |
| 9 Q9   | 8.0289140E -05    | -9.3726118E 03     | -9.3726118E 03 |
| 10 Q10 | 4.0464031E 02     | 1.7285549E 03      | 2.1331953E 03  |
| 11 Q11 | 1.6581687E 03     | -2.2959960E 03     | -6.3782722E 02 |
| 12 Q12 | 1.7695593E 03     | -8.2870946E 02     | 9.4084983E 02  |
| 13 Q13 | 2.5542569E 03     | -2.1987973E 03     | 3.5545962E 02  |
| 14 Q14 | 1.9610508E 03     | -1.9902911E 03     | -2.9240265E 01 |
| 15 Q15 | 2.0433993E 03     | -1.3964080E 03     | 6.4699130E 02  |
| 16 Q16 | 3.1393607E 03     | -2.1620456E 02     | 2.9231562E 03  |
| 17 Q17 | 2.2568946E 03     | 3.3850265E 02      | 2.5953972E 03  |
| 18 Q18 | -3.1556160E -06   | 8.1002703E 00      | 8.1002672E 00  |
| 19 Q25 | -5.5075949E 02    | 2.5385840E 03      | 1.9878245E 03  |
| 20 Q30 | -2.4707669E 03    | 3.1838465E 03      | 7.1307959E 02  |
| 21 Q31 | 1.3903622E 03     | -5.5474036E 03     | -4.1570415E 03 |
| 22 Q32 | 8.5486579E 02     | -6.1896641E 03     | -5.3347984E 03 |
| 23 Q33 | 5.0903254E 02     | -4.3593706E 02     | 7.3095470E 01  |
| 24 Q34 | -5.9701378E 02    | -5.2218182E 02     | -1.1191956E 03 |
| 25 Q35 | 7.8800380E 02     | -1.8820255E 03     | -1.0940217E 03 |
| 26 Q36 | -1.3658335E 02    | -1.3832173E 03     | -1.5198007E 03 |
| 27 Q37 | -4.2201895E 02    | 1.2597603E 03      | 8.3774139E 02  |
| 28 Q38 | -6.4643229E 02    | 1.0212990E 03      | 5.7486609E 02  |
| 29 P40 | -6.5683174E 03    | 2.2120702E 04      | 1.5552385E 04  |
| 30 P41 | -2.8965977E 03    | 7.8476681E 03      | 4.9510704E 03  |
| 31 P42 | -4.6358058E 03    | 3.8824083E 03      | -7.5339749E 02 |
| 32 P43 | -7.3363006E 03    | 1.3057995E 03      | -6.0305011E 03 |
| 33 P44 | -7.4505744E 03    | 1.3261390E 03      | -6.1244354E 03 |
| 34 P45 | -9.7796764E 03    | 5.6165830E 03      | -4.1630934E 03 |
| 35 P46 | -1.1424547E 04    | 7.7474763E 03      | -3.6770711E 03 |
| 36 P47 | -1.3173971E 04    | 8.6116629E 03      | -4.5823085E 03 |
| 37 P48 | -1.7459263E 04    | 1.1813419E 04      | -5.6458447E 03 |
| 38 P49 | -1.5775174E 04    | -1.1620211E -05    | -1.5775174E 04 |
| 39 P50 | 5.9977903E 03     | -1.6723132E 04     | -1.0725342E 04 |
| 40 P51 | -9.8832004E 02    | 3.6597497E 03      | 2.6714296E 03  |
| 41 P52 | -5.2108807E 03    | 8.1406331E 03      | 2.9297524E 03  |
| 42 P53 | -1.3033299E 04    | 1.9938421E 04      | 6.9051218E 03  |
| 43 P54 | -1.2280042E 04    | 1.8786084E 04      | 6.5060419E 03  |
| 44 P55 | -1.1528725E 04    | 9.7909447E 03      | -1.7377806E 03 |
| 45 P56 | -1.3025942E 04    | 6.0287951E 03      | -6.9971479E 03 |
| 46 P57 | -1.2415027E 04    | 5.7460443E 03      | -6.6689822E 03 |
| 47 P58 | -1.1510644E 04    | 1.8289369E 03      | -9.6815069E 03 |
| 48 P59 | -1.1044817E 04    | -1.1282955E 03     | -1.2173112E 04 |
| 49 P60 | -1.0923819E 04    | -1.6238353E -05    | -1.0923819E 04 |
| 50 P62 | 6.5526881E 02     | -3.8876711E 02     | 2.6650169E 02  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | 51.0<br>SYMMETRIC | -19.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 6.5513747E 02     | -3.8868926E 02     | 2.6644821E 02  |
| 52 P64 | 5.4411449E 01     | 8.3960884E 01      | 1.3837233E 02  |
| 53 P67 | 6.5855336E 02     | 7.0857104E 01      | 7.2941046E 02  |
| 54 P68 | 6.5842145E 02     | 7.0842934E 01      | 7.2926438E 02  |
| 55 P69 | 1.3686958E 02     | 1.2005733E 01      | 1.4887531E 02  |
| 56 P72 | 8.3092830E 00     | 6.7073250E 02      | 6.7904177E 02  |
| 57 P73 | 8.3075938E 00     | 6.7059817E 02      | 6.7890576E 02  |
| 58 P74 | 2.4125216E 02     | -1.2197190E 02     | 1.1928026E 02  |
| 59 P77 | 1.6367910E 03     | -3.5666411E 01     | 1.6011246E 03  |
| 60 P79 | 1.7914267E 03     | -5.4547663E 02     | 1.2459500E 03  |
| 61 P80 | 1.7910677E 03     | -5.4536729E 02     | 1.2457004E 03  |
| 62 P81 | 1.4674313E 01     | 9.4896653E 01      | 1.0957097E 02  |
| 63 P82 | 2.1609488E 02     | -3.3272498E 02     | -1.1663010E 02 |
| 64 P83 | -1.8546834E 02    | -2.0669116E 02     | -3.9215949E 02 |
| 65 P84 | -1.3585711E 03    | 6.4912245E 01      | -1.2936608E 03 |
| 66 P93 | -2.9393758E 02    | 1.2520961E 03      | 9.5815849E 02  |
| 67 P94 | -3.6679765E 03    | 7.5173919E 03      | 3.8494154E 03  |
| 68 P95 | -6.3441926E 03    | 1.0071147E 04      | 3.7269547E 03  |
| 69 P96 | 3.6903849E 03     | -1.0715749E 04     | -7.0253641E 03 |
| 70 P97 | 3.4026887E 03     | 4.3304182E 02      | 3.8357305E 03  |
| 71 Q19 | 2.0166235E 03     | -2.5735691E 03     | -5.5694563E 02 |
| 72 Q20 | 1.9654213E 03     | -2.3554614E 03     | -3.9004010E 02 |
| 73 Q21 | 2.1672461E 02     | 2.1404620E 03      | 2.3571866E 03  |
| 74 Q22 | -2.3871732E 02    | 2.9889966E 03      | 2.7502793E 03  |
| 75 Q23 | 1.7046570E 02     | 1.2247794E 03      | 1.3952453E 03  |
| 76 Q24 | -1.3753790E 02    | 1.5312062E 03      | 1.3936683E 03  |
| 77 Q26 | 3.5153939E 01     | 1.6084707E 03      | 1.6436246E 03  |
| 78 Q28 | -3.0053277E 02    | 3.6251301E 03      | 3.3245973E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | SLIP<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -1.5914727E 02    | -2.5031859E 03     | -2.6623331E 03 |
| 2 Q2   | 7.7297158E 01     | -1.4323986E 03     | -1.3551015E 03 |
| 3 Q3   | -1.8202268E 03    | -1.4703533E 03     | -3.2905801E 03 |
| 4 Q4   | -2.5013989E 03    | -1.3354284E 03     | -3.8368273E 03 |
| 5 Q5   | -2.9853518E 03    | -1.7149262E 03     | -4.7012780E 03 |
| 6 Q6   | -2.8656292E 03    | -1.7653074E 03     | -4.6309366E 03 |
| 7 Q7   | -3.9508931E 03    | -1.7564388E 01     | -3.9684574E 03 |
| 8 Q8   | -3.1354479E 03    | -9.7107031E 01     | -3.2325550E 03 |
| 9 Q9   | 8.0289140E -05    | 4.8487053E 03      | 4.8487054E 03  |
| 10 Q10 | 4.0464031E 02     | -3.7183302E 02     | 3.2807293E 01  |
| 11 Q11 | 1.6581687E 03     | 1.3165188E 03      | 2.9746876E 03  |
| 12 Q12 | 1.7695593E 03     | 1.0272346E 03      | 2.7967939E 03  |
| 13 Q13 | 2.5542569E 03     | 1.5629779E 03      | 4.1172348E 03  |
| 14 Q14 | 1.9610508E 03     | 1.2087339E 03      | 3.1697847E 03  |
| 15 Q15 | 2.0433993E 03     | 1.2392043E 03      | 3.2826037E 03  |
| 16 Q16 | 3.1393607E 03     | 8.8504616E 01      | 3.2278643E 03  |
| 17 Q17 | 2.2568946E 03     | -4.3509775E 01     | 2.2133848E 03  |
| 18 Q18 | -3.1556160E -06   | -7.8014122E 00     | -7.8014153E 00 |
| 19 Q25 | -5.5075949E 02    | -7.8055830E 02     | -1.3313178E 03 |
| 20 Q30 | -2.4707659E 03    | -1.5225197E 03     | -3.9932866E 03 |
| 21 Q31 | 1.3903622E 03     | 1.6819829E 03      | 3.0723451E 03  |
| 22 Q32 | 8.5486579E 02     | 1.5983441E 03      | 2.4532099E 03  |
| 23 Q33 | 5.0903254E 02     | 1.0665354E 01      | 5.1969789E 02  |
| 24 Q34 | -5.9701378E 02    | -3.1520603E 02     | -9.1221981E 02 |
| 25 Q35 | 7.8800380E 02     | 5.5668198E 02      | 1.3446858E 03  |
| 26 Q36 | -1.3658335E 02    | 1.5705190E 02      | 2.0468550E 01  |
| 27 Q37 | -4.2201875E 02    | -5.5331749E 02     | -9.7533643E 02 |
| 28 Q38 | -4.4643229E 02    | -2.7183803E 02     | -7.1827031E 02 |
| 29 P40 | -6.5683174E 03    | -9.1738681E 03     | -1.5742185E 04 |
| 30 P41 | -2.8955977E 03    | -6.0354782E 03     | -8.9320757E 03 |
| 31 P42 | -4.6358058E 03    | -5.6179007E 03     | -1.0253706E 04 |
| 32 P43 | -7.3363006E 03    | -6.1278700E 03     | -1.3464171E 04 |
| 33 P44 | -7.6505744E 03    | -6.2233205E 03     | -1.3673895E 04 |
| 34 P45 | -7.7796764E 03    | -6.9289624E 03     | -1.6708639E 04 |
| 35 P46 | -1.1424547E 04    | -7.7311583E 03     | -1.9155705E 04 |
| 36 P47 | -1.3193971E 04    | -5.9648649E 03     | -1.9158836E 04 |
| 37 P48 | -1.7459263E 04    | -6.1114008E 03     | -2.3570664E 04 |
| 38 P49 | -1.5775174E 04    | 1.7775480E -05     | -1.5775174E 04 |
| 39 P50 | 5.9977903E 03     | 4.5220796E 03      | 1.0519870E 04  |
| 40 P51 | -9.8832004E 02    | -2.9307628E 03     | -3.9190829E 03 |
| 41 P52 | -5.2108807E 03    | -5.4445412E 03     | -1.0655422E 04 |
| 42 P53 | -1.3033279E 04    | -1.1109028E 04     | -2.4142327E 04 |
| 43 P54 | -1.2280042E 04    | -1.0466984E 04     | -2.2747026E 04 |
| 44 P55 | -1.1528725E 04    | -7.7346618E 03     | -1.9263387E 04 |
| 45 P56 | -1.3025943E 04    | -7.6943866E 03     | -2.0720330E 04 |
| 46 P57 | -1.2415077E 04    | -7.3335200E 03     | -1.9748547E 04 |
| 47 P58 | -1.1519464E 04    | -4.1087641E 03     | -1.5619208E 04 |
| 48 P59 | -1.104487E 04     | -2.1611973E 03     | -1.3206014E 04 |
| 49 P50 | -1.0923819E 04    | 3.5571646E -06     | -1.0923819E 04 |
| 50 P62 | 6.5526861E 02     | 3.7442359E 02      | 1.0296924E 03  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S1.0<br>SYMMETRIC | +07.05<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 6.5513747E 02     | 3.7434855E 02      | 1.0294860E 03  |
| 52 P64 | 5.4411449E 01     | 4.7016125E 00      | 5.9113061E 01  |
| 53 P67 | 6.5855336E 02     | 9.7279470E 01      | 7.5583283E 02  |
| 54 P68 | 5.5842145E 02     | 9.7259961E 01      | 7.5568141E 02  |
| 55 P69 | 1.3686958E 02     | 4.0716000E 01      | 1.7758558E 02  |
| 56 P72 | 8.3092830E 00     | -4.4807527E 02     | -4.3976599E 02 |
| 57 P73 | 8.3075938E 00     | -4.4798551E 02     | -4.3967791E 02 |
| 58 P74 | 2.4125216E 02     | 1.0306176E 02      | 3.4431393E 02  |
| 59 P77 | 1.6367910E 03     | 9.8675615E 02      | 2.6235472E 03  |
| 60 P79 | 1.7914267E 03     | 8.7407047E 02      | 2.6654972E 03  |
| 61 P80 | 1.7910677E 03     | 8.7389532E 02      | 2.6649630E 03  |
| 62 P81 | 1.4674313E 01     | -1.2041926E 02     | -1.0574494E 02 |
| 63 P82 | 2.1609488E 02     | 1.4019364E 02      | 3.5628851E 02  |
| 64 P83 | -1.8546834E 02    | 1.1802201E 03      | 9.9475176E 02  |
| 65 P84 | -1.3585731E 03    | 1.2547048E 03      | -1.0386828E 02 |
| 66 P93 | -2.9393758E 02    | -2.7129212E 03     | -3.0068587E 03 |
| 67 P94 | -3.6679765E 03    | -6.3973515E 03     | -1.0065328E 04 |
| 68 P95 | -6.3441926E 03    | -7.5678766E 03     | -1.3912069E 04 |
| 69 P96 | 3.6903849E 03     | 4.2232257E 03      | 7.9136106E 03  |
| 70 P97 | 3.4026887E 03     | 8.8624148E 00      | 3.4115511E 03  |
| 71 Q19 | 2.0166235E 03     | 7.9793696E 02      | 2.8145604E 03  |
| 72 Q20 | 1.9654213E 03     | 3.2536211E 02      | 2.2907834E 03  |
| 73 Q21 | 2.1672461E 02     | -5.0380396E 02     | -2.8707935E 02 |
| 74 Q22 | -2.3871732E 02    | -1.0106899E 03     | -1.2494072E 03 |
| 75 Q23 | 1.7046590E 02     | -1.8515389E 02     | -1.4687986E 01 |
| 76 Q24 | -1.3753790E 02    | -3.3480284E 02     | -4.7234073E 02 |
| 77 Q26 | 3.5153939E 01     | -8.1632422E 01     | -4.6478484E 01 |
| 78 Q28 | -3.0053277E 02    | -7.9443256E 02     | -1.0949653E 03 |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S1.0<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 1 Q1   | -1.5914727E 02    | 3.0876348E 03      | 2.9284876E 03  |
| 2 Q2   | 7.7297158E 01     | 1.8308167E 03      | 1.9081139E 03  |
| 3 Q3   | -1.8202268E 03    | 1.8280481E 03      | 7.8212738E 00  |
| 4 Q4   | -2.5013989E 03    | 1.7088732E 03      | -7.9252571E 02 |
| 5 Q5   | -2.9863518E 03    | 2.2751255E 03      | -7.1122625E 02 |
| 6 Q6   | -2.8656292E 03    | 1.7605984E 03      | -1.1050308E 03 |
| 7 Q7   | -3.9508931E 03    | 6.6065323E 01      | -3.8848278E 03 |
| 8 Q8   | -3.1354479E 03    | 1.7282857E 02      | -2.9626194E 03 |
| 9 Q9   | 8.0289140E-05     | -5.8351758E 03     | -5.8351757E 03 |
| 10 Q10 | 4.0464031E 02     | 4.9810010E 02      | 9.0274041E 02  |
| 11 Q11 | 1.6581687E 03     | -1.5362794E 03     | 1.2188931E 02  |
| 12 Q12 | 1.7695593E 03     | -1.1891769E 03     | 5.8038235E 02  |
| 13 Q13 | 2.5542569E 03     | -1.8367991E 03     | 7.1745784E 02  |
| 14 Q14 | 1.9610508E 03     | -1.3597966E 03     | 6.0125419E 02  |
| 15 Q15 | 2.0433993E 03     | -1.3783405E 03     | 6.6505890E 02  |
| 16 Q16 | 3.1393607E 03     | -3.2201661E 02     | 2.8173441E 03  |
| 17 Q17 | 2.2568946E 03     | -8.8492782E 01     | 2.1684018E 03  |
| 18 Q18 | -3.1556160E-06    | 9.3153554E 00      | 9.3153523E 00  |
| 19 Q25 | -5.5075949E 02    | 9.7969398E 02      | 4.2893448E 02  |
| 20 Q30 | -2.4707669E 03    | 1.8281586E 03      | -6.4260827E 02 |
| 21 Q31 | 1.3903622E 03     | -2.0882689E 03     | -6.9790672E 02 |
| 22 Q32 | 8.5486579E 02     | -2.0028073E 03     | -1.1479415E 03 |
| 23 Q33 | 5.0903254E 02     | -5.7489232E 01     | 4.5154331E 02  |
| 24 Q34 | -5.9701378E 02    | 3.3585235E 02      | -2.6116143E 02 |
| 25 Q35 | 7.8800380E 02     | -6.9102185E 02     | 9.6981949E 01  |
| 26 Q36 | -1.3658335E 02    | -1.9281637E 02     | -3.2939972E 02 |
| 27 Q37 | -4.2201895E 02    | 6.8698012E 02      | 2.6496116E 02  |
| 28 Q38 | -4.4643229E 02    | 3.6190852E 02      | -8.4523765E 01 |
| 29 P40 | -6.5683174E 03    | 1.1024303E 04      | 4.4559852E 03  |
| 30 P41 | -2.8965977E 03    | 7.3429535E 03      | 4.4463559E 03  |
| 31 P42 | -4.6358058E 03    | 6.8253068E 03      | 2.1895010E 03  |
| 32 P43 | -7.3363006E 03    | 7.5228351E 03      | 1.8653442E 02  |
| 33 P44 | -7.4505744E 03    | 7.6400140E 03      | 1.8943963E 02  |
| 34 P45 | -9.7796764E 03    | 8.7763696E 03      | -1.0033069E 03 |
| 35 P46 | -1.1424547E 04    | 9.1409242E 03      | -2.2836232E 03 |
| 36 P47 | -1.3193971E 04    | 7.1030946E 03      | -6.0908768E 03 |
| 37 P48 | -1.7459263E 04    | 7.3547673E 03      | -1.0104496E 04 |
| 38 P49 | -1.5775174E 04    | -1.8047218E-05     | -1.5775174E 04 |
| 39 P50 | 5.9777703E 03     | -5.3684951E 03     | 6.2929522E 02  |
| 40 P51 | -9.8832004E 02    | 3.6074719E 03      | 2.6191519E 03  |
| 41 P52 | -5.2108807E 03    | 6.6197447E 03      | 1.4088640E 03  |
| 42 P53 | -1.3033299E 04    | 1.3413792E 04      | 3.8049304E 02  |
| 43 P54 | -1.2280042E 04    | 1.2538544E 04      | 3.5850220E 02  |
| 44 P55 | -1.1528725E 04    | 9.1638322E 03      | -2.3648930E 03 |
| 45 P56 | -1.3025943E 04    | 8.9595392E 03      | -4.0664039E 03 |
| 46 P57 | -1.2415027E 04    | 8.5393368E 03      | -3.8756897E 03 |
| 47 P58 | -1.1510444E 04    | 5.0669067E 03      | -6.4435371E 03 |
| 48 P59 | -1.1044817E 04    | 2.9271170E 03      | -8.1176995E 03 |
| 49 P60 | -1.0923819E 04    | -4.1376529E-06     | -1.0923819E 04 |
| 50 P62 | 6.5526881E 02     | -4.4708428E 02     | 2.0818452E 02  |

## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S1.0<br>SYMMETRIC | -08.94<br>ANTI-SYM | S + AS         |
|--------|-------------------|--------------------|----------------|
| 51 P63 | 6.5513747E 02     | -4.4699466E 02     | 2.0814281E 02  |
| 52 P64 | 5.4411449E 01     | -3.8459961E 00     | 5.0565453E 01  |
| 53 P67 | 6.5855336E 02     | -1.1090992E 02     | 5.4764345E 02  |
| 54 P68 | 6.5842145E 02     | -1.1088768E 02     | 5.4753377E 02  |
| 55 P69 | 1.3686958E 02     | -4.9021001E 01     | 8.7848580E 01  |
| 56 P72 | 8.3092830E 00     | 5.2714420E 02      | 5.3545348E 02  |
| 57 P73 | 8.3075938E 00     | 5.2703859E 02      | 5.3534618E 02  |
| 58 P74 | 2.4125216E 02     | -1.2850037E 02     | 1.1275180E 02  |
| 59 P77 | 1.6367910E 03     | -1.2285213E 03     | 4.0826971E 02  |
| 60 P79 | 1.7914267E 03     | -1.1121651E 03     | 6.7926155E 02  |
| 61 P80 | 1.7910677E 03     | -1.1119423E 03     | 6.7912544E 02  |
| 62 P81 | 1.4674313E 01     | 1.3863659E 02      | 1.5331090E 02  |
| 63 P82 | 2.1609488E 02     | -2.0138631E 02     | 1.4708561E 01  |
| 64 P83 | -1.8546834E 02    | -1.1343993E 03     | -1.3198677E 03 |
| 65 P84 | -1.3585731E 03    | -1.2087861E 03     | -2.5673591E 03 |
| 66 P93 | -2.9393758E 02    | 3.3307209E 03      | 3.0367834E 03  |
| 67 P94 | -3.6679765E 03    | 7.8088624E 03      | 4.1408859E 03  |
| 68 P95 | -6.3441926E 03    | 9.1660368E 03      | 2.8218442E 03  |
| 69 P96 | 3.6903849E 03     | -5.1483127E 03     | -1.4579278E 03 |
| 70 P97 | 3.4026887E 03     | -2.2233076E 02     | 3.1803580E 03  |
| 71 Q19 | 2.0166235E 03     | -8.8680310E 02     | 1.1298204E 03  |
| 72 Q20 | 1.9654213E 03     | -3.0661120E 02     | 1.6588101E 03  |
| 73 Q21 | 2.1672461E 02     | 6.6924742E 02      | 8.8597202E 02  |
| 74 Q22 | -2.3871732E 02    | 1.2854614E 03      | 1.0467441E 03  |
| 75 Q23 | 1.7046590E 02     | 2.7689917E 02      | 4.4736507E 02  |
| 76 Q24 | -1.3753790E 02    | 4.5163029E 02      | 3.1409240E 02  |
| 77 Q26 | 3.5153939E 01     | 1.3317118E 02      | 1.6832512E 02  |
| 78 Q28 | -3.0053277E 02    | 9.0825347E 02      | 6.0772070E 02  |

# INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S1.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|-------------------|----------------|
| 1 Q1   | -1.5914727E 02    | -7.9940501E 02    | -9.5855228E 02 |
| 2 Q2   | 7.7297158E 01     | -1.1266675E 03    | -1.0493703E 03 |
| 3 Q3   | -1.8202268E 03    | -1.1445069E 03    | -2.9647337E 03 |
| 4 Q4   | -2.5013289E 03    | -1.2134820E 03    | -3.7148809E 03 |
| 5 Q5   | -2.9853518E 03    | -7.4342105E 02    | -3.7297728E 03 |
| 6 Q6   | -2.8656292E 03    | -4.8989122E 02    | -3.3555204E 03 |
| 7 Q7   | -3.5508931E 03    | 8.9265571E 02     | -3.0582374E 03 |
| 8 Q8   | -3.1354479E 03    | 7.9325067E 02     | -2.3421973E 03 |
| 9 Q9   | 8.0289140E -05    | 1.2043389E 03     | 1.2043390E 03  |
| 10 Q10 | 4.0464031E 02     | 2.6700963E 02     | 6.7164994E 02  |
| 11 Q11 | 1.6581687E 03     | 3.8581622E 02     | 2.0439849E 03  |
| 12 Q12 | 1.7695573E 03     | 6.7664322E 02     | 2.4462025E 03  |
| 13 Q13 | 2.5542569E 03     | 6.7901831E 02     | 3.2332753E 03  |
| 14 Q14 | 1.9610508E 03     | 3.5823226E 02     | 2.3192830E 03  |
| 15 Q15 | 2.0433993E 03     | 6.1060343E 02     | 2.6540028E 03  |
| 16 Q16 | 3.1393607E 03     | 1.8571926E 02     | 3.3250799E 03  |
| 17 Q17 | 2.2568946E 03     | 2.0924267E 02     | 2.4661372E 03  |
| 18 Q18 | -3.1556160E -06   | -4.6593548E 00    | -4.6593579E 00 |
| 19 Q25 | -5.5075949E 02    | 1.8205785E 02     | -3.6870164E 02 |
| 20 Q30 | -2.4707669E 03    | -2.7907583E 02    | -2.7498428E 03 |
| 21 Q31 | 1.3905622E 03     | -4.4243557E 02    | 9.4792664E 02  |
| 22 Q32 | 8.5486579E 02     | -7.7071403E 02    | 8.4151771E 01  |
| 23 Q33 | 5.0903254E 02     | -1.2505038E 02    | 3.8398216E 02  |
| 24 Q34 | -5.5701378E 02    | -4.9245358E 02    | -1.0894673E 03 |
| 25 Q35 | 7.8800380E 02     | -1.6488598E 02    | 6.2311783E 02  |
| 26 Q36 | -1.3658345E 02    | -3.8793389E 02    | -5.2451723E 02 |
| 27 Q37 | -4.2201895E 02    | -7.9698614E 01    | -5.0171757E 02 |
| 28 Q38 | -4.4643229E 02    | 1.0056999E 02     | -3.4586230E 02 |
| 29 P40 | -6.5683174E 03    | -5.1961792E 02    | -7.0879353E 03 |
| 30 P41 | -2.6965977E 03    | -3.0904688E 03    | -5.9870664E 03 |
| 31 P42 | -4.6358058E 03    | -4.2323309E 03    | -8.8681366E 03 |
| 32 P43 | -7.3363006E 03    | -5.8497375E 03    | -1.3186038E 04 |
| 33 P44 | -7.4505744E 03    | -5.9408558E 03    | -1.3391430E 04 |
| 34 P45 | -9.7796764E 03    | -5.1930998E 03    | -1.4972776E 04 |
| 35 P46 | -1.1424547E 04    | -4.6524388E 03    | -1.6076986E 04 |
| 36 P47 | -1.5193971E 04    | -2.5816854E 03    | -1.5775657E 04 |
| 37 P48 | -1.7459263E 04    | -1.5179719E 03    | -1.8977235E 04 |
| 38 P49 | -1.5775174E 04    | 1.0658156E -05    | -1.5775174E 04 |
| 39 P50 | 5.7977903E 03     | -2.1187672E 03    | 3.8790231E 03  |
| 40 P51 | -9.8832004E 02    | -1.5963292E 03    | -2.5846492E 03 |
| 41 P52 | -5.2108807E 03    | -2.3612185E 03    | -7.5720993E 03 |
| 42 P53 | -1.3033299E 04    | -3.4124774E 03    | -1.6445796E 04 |
| 43 P54 | -1.2280062E 04    | -3.2152731E 03    | -1.5495315E 04 |
| 44 P55 | -1.1528725E 04    | -3.8574835E 03    | -1.5386209E 04 |
| 45 P56 | -1.3025943E 04    | -5.1836280E 03    | -1.8209571E 04 |
| 46 P57 | -1.2415027E 04    | -4.9405161E 03    | -1.7355543E 04 |
| 47 P58 | -1.1510444E 04    | -3.5602529E 03    | -1.5070697E 04 |
| 48 P59 | -1.1044817E 04    | -2.9262906E 03    | -1.3971107E 04 |
| 49 P60 | -1.0923819E 04    | -2.9655563E -06   | -1.0923819E 04 |
| 50 P62 | 6.5526881E 02     | 2.2362262E 02     | 8.7889141E 02  |



## INTERNAL STRESSES IN REDUNDANT STRUCTURE

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| PT     | S1.0<br>SYMMETRIC | 00.00<br>ANTI-SYM | S + AS         |
|--------|-------------------|-------------------|----------------|
| 51 P63 | 6.5513747E 02     | 2.2357778E 02     | 8.7871524E 02  |
| 52 P64 | 5.4411449E 01     | 3.6712172E 01     | 9.1123620E 01  |
| 53 P67 | 6.5855336E 02     | 1.2213566E 02     | 7.8068902E 02  |
| 54 P68 | 6.5842145E 02     | 1.2211119E 02     | 7.8053263E 02  |
| 55 P69 | 1.3686958E 02     | 4.6289421E 01     | 1.8315900E 02  |
| 56 P72 | 8.3092830E 00     | -1.7910863E 02    | -1.7079935E 02 |
| 57 P73 | 8.3075938E 00     | -1.7907273E 02    | -1.7076514E 02 |
| 58 P74 | 2.4125216E 02     | 6.0193356E 01     | 3.0144552E 02  |
| 59 P77 | 1.6367910E 03     | 1.0259734E 03     | 2.6627645E 03  |
| 60 P79 | 1.7914267E 03     | 7.2424183E 02     | 2.5156685E 03  |
| 61 P80 | 1.7910677E 03     | 7.2409668E 02     | 2.5151644E 03  |
| 62 P81 | 1.4674313E 01     | -7.9592395E 01    | -6.4918083E 01 |
| 63 P82 | 2.1609488E 02     | 3.7902612E 01     | 2.5399748E 02  |
| 64 P83 | -1.8546834E 02    | 8.7875068E 02     | 6.9328235E 02  |
| 65 P84 | -1.3585731E 03    | 1.0499696E 03     | -3.0860351E 02 |
| 66 P93 | -2.9393758E 02    | -2.3214937E 03    | -2.6154313E 03 |
| 67 P94 | -3.6679765E 03    | -3.6166140E 03    | -7.2845904E 03 |
| 68 P95 | -6.3441926E 03    | -3.7481070E 03    | -1.0092299E 04 |
| 69 P96 | 3.6903849E 03     | 8.6944716E 01     | 3.7773296E 03  |
| 70 P97 | 3.4026887E 03     | 3.5994406E 02     | 3.7626328E 03  |
| 71 Q19 | 2.0166235E 03     | -2.7482190E 02    | 1.7418016E 03  |
| 72 Q20 | 1.9654213E 03     | -6.7921241E 02    | 1.2862089E 03  |
| 73 Q21 | 2.1672461E 02     | 2.8624711E 02     | 5.0297172E 02  |
| 74 Q22 | -2.3871732E 02    | 1.0261170E 02     | -1.3610562E 02 |
| 75 Q23 | 1.7046590E 02     | 2.5358861E 02     | 4.2405451E 02  |
| 76 Q24 | -1.3753790E 02    | 2.2774823E 02     | 9.0210327E 01  |
| 77 Q26 | 3.5153939E 01     | 5.2821168E 02     | 5.6336562E 02  |
| 78 Q28 | -3.0053277E 02    | 6.7549376E 02     | 3.7496099E 02  |

VIII. 1-g FLIGHT DEFLECTION INFLUENCE  
COEFFICIENTS (CONFIGURATION 5B)

The 1-g-flight deflection influence coefficients, for Configuration 5B, are presented as the matrix AMN. See pages 363-369 for the coefficients due to symmetrical loading and pages 382-388 for those due to anti-symmetrical loading. These coefficients were used in flutter analysis.

The AIJ member flexibility matrix (Pgs. 312-351), from which the deflection influence coefficients are derived, is based on Configuration 5B, or 1-g wing loading.

7. JUNE 1963

JOB 311

REDUNDANT STRESS ANALYSIS

F = 10400000.0

5-H SYMMETRIC

MEMBER FLEXIBILITY INFLUENCE COEFFICIENTS  
CONFIGURATION 5-B

PAGE 312

| ADJ 5B | 1 Q1          | 2 Q2          | 3 Q3          | 4 Q4          |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 8.3774217E 03 | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 7.8200249E 03 | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 7.1509499E 03 | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 6.7041708E 03 |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P61 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| AIJ 58 | 1 Q1 | 2 Q2 | 3 Q3 | 4 Q4 |
|--------|------|------|------|------|
| 51 P63 | 0.   | 0.   | 0.   | 0.   |
| 52 P64 | 0.   | 0.   | 0.   | 0.   |
| 53 P67 | 0.   | 0.   | 0.   | 0.   |
| 54 P68 | 0.   | 0.   | 0.   | 0.   |
| 55 P69 | 0.   | 0.   | 0.   | 0.   |
| 56 P72 | 0.   | 0.   | 0.   | 0.   |
| 57 P73 | 0.   | 0.   | 0.   | 0.   |
| 58 P74 | 0.   | 0.   | 0.   | 0.   |
| 59 P77 | 0.   | 0.   | 0.   | 0.   |
| 60 P79 | 0.   | 0.   | 0.   | 0.   |
| 61 P80 | 0.   | 0.   | 0.   | 0.   |
| 62 P81 | 0.   | 0.   | 0.   | 0.   |
| 63 P82 | 0.   | 0.   | 0.   | 0.   |
| 64 P83 | 0.   | 0.   | 0.   | 0.   |
| 65 P84 | 0.   | 0.   | 0.   | 0.   |
| 66 P93 | 0.   | 0.   | 0.   | 0.   |
| 67 P94 | 0.   | 0.   | 0.   | 0.   |
| 68 P95 | 0.   | 0.   | 0.   | 0.   |
| 69 P96 | 0.   | 0.   | 0.   | 0.   |
| 70 P97 | 0.   | 0.   | 0.   | 0.   |
| 71 Q19 | 0.   | 0.   | 0.   | 0.   |
| 72 Q20 | 0.   | 0.   | 0.   | 0.   |
| 73 Q21 | 0.   | 0.   | 0.   | 0.   |
| 74 Q22 | 0.   | 0.   | 0.   | 0.   |
| 75 Q23 | 0.   | 0.   | 0.   | 0.   |
| 76 Q24 | 0.   | 0.   | 0.   | 0.   |
| 77 Q26 | 0.   | 0.   | 0.   | 0.   |
| 78 Q28 | 0.   | 0.   | 0.   | 0.   |

| AIJ 5H | 5 Q5          | 6 Q6          | 7 Q7          | 8 Q8          |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 7.0381297E 03 | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 6.2564381E 03 | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 5.1872830E 03 | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 4.2328224E 03 |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| AIJ 5B | 5 Q5 | 6 Q6 | 7 Q7 | 8 Q8 |
|--------|------|------|------|------|
| 51 P63 | 0.   | 0.   | 0.   | 0.   |
| 52 P64 | 0.   | 0.   | 0.   | 0.   |
| 53 P67 | 0.   | 0.   | 0.   | 0.   |
| 54 P68 | 0.   | 0.   | 0.   | 0.   |
| 55 P69 | 0.   | 0.   | 0.   | 0.   |
| 56 P72 | 0.   | 0.   | 0.   | 0.   |
| 57 P73 | 0.   | 0.   | 0.   | 0.   |
| 58 P74 | 0.   | 0.   | 0.   | 0.   |
| 59 P77 | 0.   | 0.   | 0.   | 0.   |
| 60 P79 | 0.   | 0.   | 0.   | 0.   |
| 61 P80 | 0.   | 0.   | 0.   | 0.   |
| 62 P81 | 0.   | 0.   | 0.   | 0.   |
| 63 P82 | 0.   | 0.   | 0.   | 0.   |
| 64 P83 | 0.   | 0.   | 0.   | 0.   |
| 65 P84 | 0.   | 0.   | 0.   | 0.   |
| 66 P93 | 0.   | 0.   | 0.   | 0.   |
| 67 P94 | 0.   | 0.   | 0.   | 0.   |
| 68 P95 | 0.   | 0.   | 0.   | 0.   |
| 69 P96 | 0.   | 0.   | 0.   | 0.   |
| 70 P97 | 0.   | 0.   | 0.   | 0.   |
| 71 Q19 | 0.   | 0.   | 0.   | 0.   |
| 72 Q20 | 0.   | 0.   | 0.   | 0.   |
| 73 Q21 | 0.   | 0.   | 0.   | 0.   |
| 74 Q22 | 0.   | 0.   | 0.   | 0.   |
| 75 Q23 | 0.   | 0.   | 0.   | 0.   |
| 76 Q24 | 0.   | 0.   | 0.   | 0.   |
| 77 Q26 | 0.   | 0.   | 0.   | 0.   |
| 78 Q28 | 0.   | 0.   | 0.   | 0.   |

| AIJ 5B | 9 Q9          | 10 Q10        | 11 Q11        | 12 Q12        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 7.6267024E 03 | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 1.0174328E 04 | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 9.5155935E 03 | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 8.7139099E 03 |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |



| AIJ 5B | 9 Q9 | 10 Q10 | 11 Q11 | 12 Q12 |
|--------|------|--------|--------|--------|
| 51 P63 | 0.   | 0.     | 0.     | 0.     |
| 52 P64 | 0.   | 0.     | 0.     | 0.     |
| 53 P67 | 0.   | 0.     | 0.     | 0.     |
| 54 P68 | 0.   | 0.     | 0.     | 0.     |
| 55 P69 | 0.   | 0.     | 0.     | 0.     |
| 56 P72 | 0.   | 0.     | 0.     | 0.     |
| 57 P73 | 0.   | 0.     | 0.     | 0.     |
| 58 P74 | 0.   | 0.     | 0.     | 0.     |
| 59 P77 | 0.   | 0.     | 0.     | 0.     |
| 60 P79 | 0.   | 0.     | 0.     | 0.     |
| 61 P80 | 0.   | 0.     | 0.     | 0.     |
| 62 P81 | 0.   | 0.     | 0.     | 0.     |
| 63 P82 | 0.   | 0.     | 0.     | 0.     |
| 64 P83 | 0.   | 0.     | 0.     | 0.     |
| 65 P84 | 0.   | 0.     | 0.     | 0.     |
| 66 P93 | 0.   | 0.     | 0.     | 0.     |
| 67 P94 | 0.   | 0.     | 0.     | 0.     |
| 68 P95 | 0.   | 0.     | 0.     | 0.     |
| 69 P96 | 0.   | 0.     | 0.     | 0.     |
| 70 P97 | 0.   | 0.     | 0.     | 0.     |
| 71 Q19 | 0.   | 0.     | 0.     | 0.     |
| 72 Q20 | 0.   | 0.     | 0.     | 0.     |
| 73 Q21 | 0.   | 0.     | 0.     | 0.     |
| 74 Q22 | 0.   | 0.     | 0.     | 0.     |
| 75 Q23 | 0.   | 0.     | 0.     | 0.     |
| 76 Q24 | 0.   | 0.     | 0.     | 0.     |
| 77 Q26 | 0.   | 0.     | 0.     | 0.     |
| 78 Q28 | 0.   | 0.     | 0.     | 0.     |

| AIJ 58 | 13 Q13        | 14 Q14        | 15 Q15        | 16 Q16        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 8.1785749E 03 | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 6.4311910E 03 | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 5.7883847E 03 | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 4.1473110E 03 |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| AIJ 5B | 13 Q13 | 14 Q14 | 15 Q15 | 16 Q16 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| AIJ 5B | 17 Q17        | 18 Q18        | 19 Q25        | 20 Q30        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 3.3231666E 03 | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 6.5935000E 03 | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 4.5670133E 04 | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 6.0327421E 04 |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| A1J 5B | 17 Q17 | 18 Q18 | 19 Q25 | 20 Q30 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| AIJ 58 | 21 Q31        | 22 Q32        | 23 Q33        | 24 Q34        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 9.7006092E 03 | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 9.4679530E 03 | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 1.6007063E 04 | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 1.5895188E 04 |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| AIJ 5B | 21 Q31 | 22 Q32 | 23 Q33 | 24 Q34 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| AIJ 58 | 25 Q35        | 26 Q36        | 27 Q37        | 28 Q38        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 1.2658213E 04 | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 1.2688517E 04 | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 1.3509631E 04 | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 1.3621977E 04 |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |



| AIJ 58 | 25 Q35 | 26 Q36 | 27 Q37 | 28 Q38 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| AIJ 5H | 29 P40        | 30 P41        | 31 P42        | 32 P43        |
|--------|---------------|---------------|---------------|---------------|
| 1 01   | 0.            | 0.            | 0.            | 0.            |
| 2 02   | 0.            | 0.            | 0.            | 0.            |
| 3 03   | 0.            | 0.            | 0.            | 0.            |
| 4 04   | 0.            | 0.            | 0.            | 0.            |
| 5 05   | 0.            | 0.            | 0.            | 0.            |
| 6 06   | 0.            | 0.            | 0.            | 0.            |
| 7 07   | 0.            | 0.            | 0.            | 0.            |
| 8 08   | 0.            | 0.            | 0.            | 0.            |
| 9 09   | 0.            | 0.            | 0.            | 0.            |
| 10 010 | 0.            | 0.            | 0.            | 0.            |
| 11 011 | 0.            | 0.            | 0.            | 0.            |
| 12 012 | 0.            | 0.            | 0.            | 0.            |
| 13 013 | 0.            | 0.            | 0.            | 0.            |
| 14 014 | 0.            | 0.            | 0.            | 0.            |
| 15 015 | 0.            | 0.            | 0.            | 0.            |
| 16 016 | 0.            | 0.            | 0.            | 0.            |
| 17 017 | 0.            | 0.            | 0.            | 0.            |
| 18 018 | 0.            | 0.            | 0.            | 0.            |
| 19 025 | 0.            | 0.            | 0.            | 0.            |
| 20 030 | 0.            | 0.            | 0.            | 0.            |
| 21 031 | 0.            | 0.            | 0.            | 0.            |
| 22 032 | 0.            | 0.            | 0.            | 0.            |
| 23 033 | 0.            | 0.            | 0.            | 0.            |
| 24 034 | 0.            | 0.            | 0.            | 0.            |
| 25 035 | 0.            | 0.            | 0.            | 0.            |
| 26 036 | 0.            | 0.            | 0.            | 0.            |
| 27 037 | 0.            | 0.            | 0.            | 0.            |
| 28 038 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 4.7336000E 01 | 9.4760000E 00 | 0.            | 0.            |
| 30 P41 | 9.4760000E 00 | 3.1186000E 01 | 6.4760000E 00 | 0.            |
| 31 P42 | 0.            | 6.4760000E 00 | 2.2856000E 01 | 5.3200000E 00 |
| 32 P43 | 0.            | 0.            | 5.3200000E 00 | 1.0418000E 01 |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| A1J 58 | 29 P40 | 30 P41 | 31 P42 | 32 P43 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| A1J 58 | 33 P44        | 34 P45        | 35 P46        | 36 P47        |
|--------|---------------|---------------|---------------|---------------|
| 1 01   | 0.            | 0.            | 0.            | 0.            |
| 2 02   | 0.            | 0.            | 0.            | 0.            |
| 3 03   | 0.            | 0.            | 0.            | 0.            |
| 4 04   | 0.            | 0.            | 0.            | 0.            |
| 5 05   | 0.            | 0.            | 0.            | 0.            |
| 6 06   | 0.            | 0.            | 0.            | 0.            |
| 7 07   | 0.            | 0.            | 0.            | 0.            |
| 8 08   | 0.            | 0.            | 0.            | 0.            |
| 9 09   | 0.            | 0.            | 0.            | 0.            |
| 10 010 | 0.            | 0.            | 0.            | 0.            |
| 11 011 | 0.            | 0.            | 0.            | 0.            |
| 12 012 | 0.            | 0.            | 0.            | 0.            |
| 13 013 | 0.            | 0.            | 0.            | 0.            |
| 14 014 | 0.            | 0.            | 0.            | 0.            |
| 15 015 | 0.            | 0.            | 0.            | 0.            |
| 16 016 | 0.            | 0.            | 0.            | 0.            |
| 17 017 | 0.            | 0.            | 0.            | 0.            |
| 18 018 | 0.            | 0.            | 0.            | 0.            |
| 19 029 | 0.            | 0.            | 0.            | 0.            |
| 20 J30 | 0.            | 0.            | 0.            | 0.            |
| 21 031 | 0.            | 0.            | 0.            | 0.            |
| 22 032 | 0.            | 0.            | 0.            | 0.            |
| 23 033 | 0.            | 0.            | 0.            | 0.            |
| 24 034 | 0.            | 0.            | 0.            | 0.            |
| 25 035 | 0.            | 0.            | 0.            | 0.            |
| 26 036 | 0.            | 0.            | 0.            | 0.            |
| 27 037 | 0.            | 0.            | 0.            | 0.            |
| 28 038 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 1,2852000E 01 | 6,8200999E 00 | 0.            | 0.            |
| 34 P45 | 6,8200999E 00 | 2,5147200E 01 | 9,9489999E 00 | 0.            |
| 35 P46 | 0.            | 9,9489999E 00 | 2,1539500E 01 | 4,5760000E 00 |
| 36 P47 | 0.            | 0.            | 4,5760000E 00 | 1,7037500E 01 |
| 37 P48 | 0.            | 0.            | 0.            | 4,5783000E 00 |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| A1J 58 | 33 P44 | 34 P45 | 35 P46 | 36 P47 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| A1J 58 | 37 P48        | 38 P49        | 39 P50        | 40 P51        |
|--------|---------------|---------------|---------------|---------------|
| 1 01   | 0.            | 0.            | 0.            | 0.            |
| 2 02   | 0.            | 0.            | 0.            | 0.            |
| 3 03   | 0.            | 0.            | 0.            | 0.            |
| 4 04   | 0.            | 0.            | 0.            | 0.            |
| 5 05   | 0.            | 0.            | 0.            | 0.            |
| 6 06   | 0.            | 0.            | 0.            | 0.            |
| 7 07   | 0.            | 0.            | 0.            | 0.            |
| 8 08   | 0.            | 0.            | 0.            | 0.            |
| 9 09   | 0.            | 0.            | 0.            | 0.            |
| 10 010 | 0.            | 0.            | 0.            | 0.            |
| 11 011 | 0.            | 0.            | 0.            | 0.            |
| 12 012 | 0.            | 0.            | 0.            | 0.            |
| 13 013 | 0.            | 0.            | 0.            | 0.            |
| 14 014 | 0.            | 0.            | 0.            | 0.            |
| 15 015 | 0.            | 0.            | 0.            | 0.            |
| 16 016 | 0.            | 0.            | 0.            | 0.            |
| 17 017 | 0.            | 0.            | 0.            | 0.            |
| 18 018 | 0.            | 0.            | 0.            | 0.            |
| 19 029 | 0.            | 0.            | 0.            | 0.            |
| 20 030 | 0.            | 0.            | 0.            | 0.            |
| 21 031 | 0.            | 0.            | 0.            | 0.            |
| 22 032 | 0.            | 0.            | 0.            | 0.            |
| 23 033 | 0.            | 0.            | 0.            | 0.            |
| 24 034 | 0.            | 0.            | 0.            | 0.            |
| 25 035 | 0.            | 0.            | 0.            | 0.            |
| 26 036 | 0.            | 0.            | 0.            | 0.            |
| 27 037 | 0.            | 0.            | 0.            | 0.            |
| 28 038 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 4.5783000E 00 | 0.            | 0.            | 0.            |
| 37 P48 | 2.3698000E 01 | 6.3279999E 00 | 0.            | 0.            |
| 38 P49 | 6.3279999E 00 | 1.1754000E 01 | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 6.1183999E 01 | 1.2026000E 01 |
| 40 P51 | 0.            | 0.            | 1.2026000E 01 | 3.8887999E 01 |
| 41 P52 | 0.            | 0.            | 0.            | 8.2479999E 00 |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 0.            | 0.            | 0.            | 0.            |
| 45 P56 | 0.            | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| A1J 58 | 37 P48 | 38 P49 | 39 P50 | 40 P51 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| AIJ 5H | 41 P52        | 42 P53        | 43 P54        | 44 P55        |
|--------|---------------|---------------|---------------|---------------|
| 1 01   | 0.            | 0.            | 0.            | 0.            |
| 2 02   | 0.            | 0.            | 0.            | 0.            |
| 3 03   | 0.            | 0.            | 0.            | 0.            |
| 4 04   | 0.            | 0.            | 0.            | 0.            |
| 5 05   | 0.            | 0.            | 0.            | 0.            |
| 6 06   | 0.            | 0.            | 0.            | 0.            |
| 7 07   | 0.            | 0.            | 0.            | 0.            |
| 8 08   | 0.            | 0.            | 0.            | 0.            |
| 9 09   | 0.            | 0.            | 0.            | 0.            |
| 10 010 | 0.            | 0.            | 0.            | 0.            |
| 11 011 | 0.            | 0.            | 0.            | 0.            |
| 12 012 | 0.            | 0.            | 0.            | 0.            |
| 13 013 | 0.            | 0.            | 0.            | 0.            |
| 14 014 | 0.            | 0.            | 0.            | 0.            |
| 15 015 | 0.            | 0.            | 0.            | 0.            |
| 16 016 | 0.            | 0.            | 0.            | 0.            |
| 17 017 | 0.            | 0.            | 0.            | 0.            |
| 18 018 | 0.            | 0.            | 0.            | 0.            |
| 19 025 | 0.            | 0.            | 0.            | 0.            |
| 20 030 | 0.            | 0.            | 0.            | 0.            |
| 21 031 | 0.            | 0.            | 0.            | 0.            |
| 22 032 | 0.            | 0.            | 0.            | 0.            |
| 23 033 | 0.            | 0.            | 0.            | 0.            |
| 24 034 | 0.            | 0.            | 0.            | 0.            |
| 25 035 | 0.            | 0.            | 0.            | 0.            |
| 26 036 | 0.            | 0.            | 0.            | 0.            |
| 27 037 | 0.            | 0.            | 0.            | 0.            |
| 28 038 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 8.2479999E 00 | 0.            | 0.            | 0.            |
| 41 P52 | 3.0104000E 01 | 7.2580000E 00 | 0.            | 0.            |
| 42 P53 | 7.2580000E 00 | 1.3154000E 01 | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 1.5230000E 01 | 7.3380000E 00 |
| 44 P55 | 0.            | 0.            | 7.3380000E 00 | 2.7532000E 01 |
| 45 P56 | 0.            | 0.            | 0.            | 6.6400000E 00 |
| 46 P57 | 0.            | 0.            | 0.            | 0.            |
| 47 P58 | 0.            | 0.            | 0.            | 0.            |
| 48 P59 | 0.            | 0.            | 0.            | 0.            |
| 49 P60 | 0.            | 0.            | 0.            | 0.            |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |



| A1J 5R | 41 P52 | 42 P53 | 43 P54 | 44 P55 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P94 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| AIJ 58 | 45 P56        | 46 P57        | 47 P58        | 48 P59        |
|--------|---------------|---------------|---------------|---------------|
| 1 Q1   | 0.            | 0.            | 0.            | 0.            |
| 2 Q2   | 0.            | 0.            | 0.            | 0.            |
| 3 Q3   | 0.            | 0.            | 0.            | 0.            |
| 4 Q4   | 0.            | 0.            | 0.            | 0.            |
| 5 Q5   | 0.            | 0.            | 0.            | 0.            |
| 6 Q6   | 0.            | 0.            | 0.            | 0.            |
| 7 Q7   | 0.            | 0.            | 0.            | 0.            |
| 8 Q8   | 0.            | 0.            | 0.            | 0.            |
| 9 Q9   | 0.            | 0.            | 0.            | 0.            |
| 10 Q10 | 0.            | 0.            | 0.            | 0.            |
| 11 Q11 | 0.            | 0.            | 0.            | 0.            |
| 12 Q12 | 0.            | 0.            | 0.            | 0.            |
| 13 Q13 | 0.            | 0.            | 0.            | 0.            |
| 14 Q14 | 0.            | 0.            | 0.            | 0.            |
| 15 Q15 | 0.            | 0.            | 0.            | 0.            |
| 16 Q16 | 0.            | 0.            | 0.            | 0.            |
| 17 Q17 | 0.            | 0.            | 0.            | 0.            |
| 18 Q18 | 0.            | 0.            | 0.            | 0.            |
| 19 Q25 | 0.            | 0.            | 0.            | 0.            |
| 20 Q30 | 0.            | 0.            | 0.            | 0.            |
| 21 Q31 | 0.            | 0.            | 0.            | 0.            |
| 22 Q32 | 0.            | 0.            | 0.            | 0.            |
| 23 Q33 | 0.            | 0.            | 0.            | 0.            |
| 24 Q34 | 0.            | 0.            | 0.            | 0.            |
| 25 Q35 | 0.            | 0.            | 0.            | 0.            |
| 26 Q36 | 0.            | 0.            | 0.            | 0.            |
| 27 Q37 | 0.            | 0.            | 0.            | 0.            |
| 28 Q38 | 0.            | 0.            | 0.            | 0.            |
| 29 P40 | 0.            | 0.            | 0.            | 0.            |
| 30 P41 | 0.            | 0.            | 0.            | 0.            |
| 31 P42 | 0.            | 0.            | 0.            | 0.            |
| 32 P43 | 0.            | 0.            | 0.            | 0.            |
| 33 P44 | 0.            | 0.            | 0.            | 0.            |
| 34 P45 | 0.            | 0.            | 0.            | 0.            |
| 35 P46 | 0.            | 0.            | 0.            | 0.            |
| 36 P47 | 0.            | 0.            | 0.            | 0.            |
| 37 P48 | 0.            | 0.            | 0.            | 0.            |
| 38 P49 | 0.            | 0.            | 0.            | 0.            |
| 39 P50 | 0.            | 0.            | 0.            | 0.            |
| 40 P51 | 0.            | 0.            | 0.            | 0.            |
| 41 P52 | 0.            | 0.            | 0.            | 0.            |
| 42 P53 | 0.            | 0.            | 0.            | 0.            |
| 43 P54 | 0.            | 0.            | 0.            | 0.            |
| 44 P55 | 6.6400000E 00 | 0.            | 0.            | 0.            |
| 45 P56 | 1.3102000E 01 | 0.            | 0.            | 0.            |
| 46 P57 | 0.            | 1.0726000E 01 | 4.9550000E 00 | 0.            |
| 47 P58 | 0.            | 4.9550000E 00 | 1.8024000E 01 | 4.4770000E 00 |
| 48 P59 | 0.            | 0.            | 4.4770000E 00 | 2.1322000E 01 |
| 49 P60 | 0.            | 0.            | 0.            | 5.7359999E 00 |
| 50 P62 | 0.            | 0.            | 0.            | 0.            |

| AIJ 5R | 45 P56 | 46 P57 | 47 P58 | 48 P59 |
|--------|--------|--------|--------|--------|
| 51 P63 | 0.     | 0.     | 0.     | 0.     |
| 52 P64 | 0.     | 0.     | 0.     | 0.     |
| 53 P67 | 0.     | 0.     | 0.     | 0.     |
| 54 P68 | 0.     | 0.     | 0.     | 0.     |
| 55 P69 | 0.     | 0.     | 0.     | 0.     |
| 56 P72 | 0.     | 0.     | 0.     | 0.     |
| 57 P73 | 0.     | 0.     | 0.     | 0.     |
| 58 P74 | 0.     | 0.     | 0.     | 0.     |
| 59 P77 | 0.     | 0.     | 0.     | 0.     |
| 60 P79 | 0.     | 0.     | 0.     | 0.     |
| 61 P80 | 0.     | 0.     | 0.     | 0.     |
| 62 P81 | 0.     | 0.     | 0.     | 0.     |
| 63 P82 | 0.     | 0.     | 0.     | 0.     |
| 64 P83 | 0.     | 0.     | 0.     | 0.     |
| 65 P84 | 0.     | 0.     | 0.     | 0.     |
| 66 P93 | 0.     | 0.     | 0.     | 0.     |
| 67 P94 | 0.     | 0.     | 0.     | 0.     |
| 68 P95 | 0.     | 0.     | 0.     | 0.     |
| 69 P96 | 0.     | 0.     | 0.     | 0.     |
| 70 P97 | 0.     | 0.     | 0.     | 0.     |
| 71 Q19 | 0.     | 0.     | 0.     | 0.     |
| 72 Q20 | 0.     | 0.     | 0.     | 0.     |
| 73 Q21 | 0.     | 0.     | 0.     | 0.     |
| 74 Q22 | 0.     | 0.     | 0.     | 0.     |
| 75 Q23 | 0.     | 0.     | 0.     | 0.     |
| 76 Q24 | 0.     | 0.     | 0.     | 0.     |
| 77 Q26 | 0.     | 0.     | 0.     | 0.     |
| 78 Q28 | 0.     | 0.     | 0.     | 0.     |

| AIJ 5B | 49 P60        | 50 P62        | 51 P63 | 52 P64 |
|--------|---------------|---------------|--------|--------|
| 1 Q1   | 0.            | 0.            | 0.     | 0.     |
| 2 Q2   | 0.            | 0.            | 0.     | 0.     |
| 3 Q3   | 0.            | 0.            | 0.     | 0.     |
| 4 Q4   | 0.            | 0.            | 0.     | 0.     |
| 5 Q5   | 0.            | 0.            | 0.     | 0.     |
| 6 Q6   | 0.            | 0.            | 0.     | 0.     |
| 7 Q7   | 0.            | 0.            | 0.     | 0.     |
| 8 Q8   | 0.            | 0.            | 0.     | 0.     |
| 9 Q9   | 0.            | 0.            | 0.     | 0.     |
| 10 Q10 | 0.            | 0.            | 0.     | 0.     |
| 11 Q11 | 0.            | 0.            | 0.     | 0.     |
| 12 Q12 | 0.            | 0.            | 0.     | 0.     |
| 13 Q13 | 0.            | 0.            | 0.     | 0.     |
| 14 Q14 | 0.            | 0.            | 0.     | 0.     |
| 15 Q15 | 0.            | 0.            | 0.     | 0.     |
| 16 Q16 | 0.            | 0.            | 0.     | 0.     |
| 17 Q17 | 0.            | 0.            | 0.     | 0.     |
| 18 Q18 | 0.            | 0.            | 0.     | 0.     |
| 19 Q25 | 0.            | 0.            | 0.     | 0.     |
| 20 Q30 | 0.            | 0.            | 0.     | 0.     |
| 21 Q31 | 0.            | 0.            | 0.     | 0.     |
| 22 Q32 | 0.            | 0.            | 0.     | 0.     |
| 23 Q33 | 0.            | 0.            | 0.     | 0.     |
| 24 Q34 | 0.            | 0.            | 0.     | 0.     |
| 25 Q35 | 0.            | 0.            | 0.     | 0.     |
| 26 Q36 | 0.            | 0.            | 0.     | 0.     |
| 27 Q37 | 0.            | 0.            | 0.     | 0.     |
| 28 Q38 | 0.            | 0.            | 0.     | 0.     |
| 29 P40 | 0.            | 0.            | 0.     | 0.     |
| 30 P41 | 0.            | 0.            | 0.     | 0.     |
| 31 P42 | 0.            | 0.            | 0.     | 0.     |
| 32 P43 | 0.            | 0.            | 0.     | 0.     |
| 33 P44 | 0.            | 0.            | 0.     | 0.     |
| 34 P45 | 0.            | 0.            | 0.     | 0.     |
| 35 P46 | 0.            | 0.            | 0.     | 0.     |
| 36 P47 | 0.            | 0.            | 0.     | 0.     |
| 37 P48 | 0.            | 0.            | 0.     | 0.     |
| 38 P49 | 0.            | 0.            | 0.     | 0.     |
| 39 P50 | 0.            | 0.            | 0.     | 0.     |
| 40 P51 | 0.            | 0.            | 0.     | 0.     |
| 41 P52 | 0.            | 0.            | 0.     | 0.     |
| 42 P53 | 0.            | 0.            | 0.     | 0.     |
| 43 P54 | 0.            | 0.            | 0.     | 0.     |
| 44 P55 | 0.            | 0.            | 0.     | 0.     |
| 45 P56 | 0.            | 0.            | 0.     | 0.     |
| 46 P57 | 0.            | 0.            | 0.     | 0.     |
| 47 P58 | 0.            | 0.            | 0.     | 0.     |
| 48 P59 | 5.7359999E 00 | 0.            | 0.     | 0.     |
| 49 P60 | 1.0837000E 01 | 0.            | 0.     | 0.     |
| 50 P62 | 0.            | 1.6364000E 01 | 0.     | 0.     |

| AIJ 58 | 49 P60 | 50 P62 | 51 P63        | 52 P64 |
|--------|--------|--------|---------------|--------|
| 51 P63 | 0.     | 0.     | 1.5892000E 01 | 0.     |
| 52 P64 | 0.     | 0.     | 0.            | 0.     |
| 53 P67 | 0.     | 0.     | 0.            | 0.     |
| 54 P68 | 0.     | 0.     | 0.            | 0.     |
| 55 P69 | 0.     | 0.     | 0.            | 0.     |
| 56 P72 | 0.     | 0.     | 0.            | 0.     |
| 57 P73 | 0.     | 0.     | 0.            | 0.     |
| 58 P74 | 0.     | 0.     | 0.            | 0.     |
| 59 P77 | 0.     | 0.     | 0.            | 0.     |
| 60 P79 | 0.     | 0.     | 0.            | 0.     |
| 61 P80 | 0.     | 0.     | 0.            | 0.     |
| 62 P81 | 0.     | 0.     | 0.            | 0.     |
| 63 P82 | 0.     | 0.     | 0.            | 0.     |
| 64 P83 | 0.     | 0.     | 0.            | 0.     |
| 65 P84 | 0.     | 0.     | 0.            | 0.     |
| 66 P93 | 0.     | 0.     | 0.            | 0.     |
| 67 P94 | 0.     | 0.     | 0.            | 0.     |
| 68 P95 | 0.     | 0.     | 0.            | 0.     |
| 69 P96 | 0.     | 0.     | 0.            | 0.     |
| 70 P97 | 0.     | 0.     | 0.            | 0.     |
| 71 Q19 | 0.     | 0.     | 0.            | 0.     |
| 72 Q20 | 0.     | 0.     | 0.            | 0.     |
| 73 Q21 | 0.     | 0.     | 0.            | 0.     |
| 74 Q22 | 0.     | 0.     | 0.            | 0.     |
| 75 Q23 | 0.     | 0.     | 0.            | 0.     |
| 76 Q24 | 0.     | 0.     | 0.            | 0.     |
| 77 Q26 | 0.     | 0.     | 0.            | 0.     |
| 78 Q28 | 0.     | 0.     | 0.            | 0.     |

| A1J 58 | 53 P67 | 54 P68 | 55 P69 | 56 P72 |
|--------|--------|--------|--------|--------|
| 1 Q1   | 0.     | 0.     | 0.     | 0.     |
| 2 Q2   | 0.     | 0.     | 0.     | 0.     |
| 3 Q3   | 0.     | 0.     | 0.     | 0.     |
| 4 Q4   | 0.     | 0.     | 0.     | 0.     |
| 5 Q5   | 0.     | 0.     | 0.     | 0.     |
| 6 Q6   | 0.     | 0.     | 0.     | 0.     |
| 7 Q7   | 0.     | 0.     | 0.     | 0.     |
| 8 Q8   | 0.     | 0.     | 0.     | 0.     |
| 9 Q9   | 0.     | 0.     | 0.     | 0.     |
| 10 Q10 | 0.     | 0.     | 0.     | 0.     |
| 11 Q11 | 0.     | 0.     | 0.     | 0.     |
| 12 Q12 | 0.     | 0.     | 0.     | 0.     |
| 13 Q13 | 0.     | 0.     | 0.     | 0.     |
| 14 Q14 | 0.     | 0.     | 0.     | 0.     |
| 15 Q15 | 0.     | 0.     | 0.     | 0.     |
| 16 Q16 | 0.     | 0.     | 0.     | 0.     |
| 17 Q17 | 0.     | 0.     | 0.     | 0.     |
| 18 Q18 | 0.     | 0.     | 0.     | 0.     |
| 19 Q25 | 0.     | 0.     | 0.     | 0.     |
| 20 Q30 | 0.     | 0.     | 0.     | 0.     |
| 21 Q31 | 0.     | 0.     | 0.     | 0.     |
| 22 Q32 | 0.     | 0.     | 0.     | 0.     |
| 23 Q33 | 0.     | 0.     | 0.     | 0.     |
| 24 Q34 | 0.     | 0.     | 0.     | 0.     |
| 25 Q35 | 0.     | 0.     | 0.     | 0.     |
| 26 Q36 | 0.     | 0.     | 0.     | 0.     |
| 27 Q37 | 0.     | 0.     | 0.     | 0.     |
| 28 Q38 | 0.     | 0.     | 0.     | 0.     |
| 29 P40 | 0.     | 0.     | 0.     | 0.     |
| 30 P41 | 0.     | 0.     | 0.     | 0.     |
| 31 P42 | 0.     | 0.     | 0.     | 0.     |
| 32 P43 | 0.     | 0.     | 0.     | 0.     |
| 33 P44 | 0.     | 0.     | 0.     | 0.     |
| 34 P45 | 0.     | 0.     | 0.     | 0.     |
| 35 P46 | 0.     | 0.     | 0.     | 0.     |
| 36 P47 | 0.     | 0.     | 0.     | 0.     |
| 37 P48 | 0.     | 0.     | 0.     | 0.     |
| 38 P49 | 0.     | 0.     | 0.     | 0.     |
| 39 P50 | 0.     | 0.     | 0.     | 0.     |
| 40 P51 | 0.     | 0.     | 0.     | 0.     |
| 41 P52 | 0.     | 0.     | 0.     | 0.     |
| 42 P53 | 0.     | 0.     | 0.     | 0.     |
| 43 P54 | 0.     | 0.     | 0.     | 0.     |
| 44 P55 | 0.     | 0.     | 0.     | 0.     |
| 45 P56 | 0.     | 0.     | 0.     | 0.     |
| 46 P57 | 0.     | 0.     | 0.     | 0.     |
| 47 P58 | 0.     | 0.     | 0.     | 0.     |
| 48 P59 | 0.     | 0.     | 0.     | 0.     |
| 49 P60 | 0.     | 0.     | 0.     | 0.     |
| 50 P62 | 0.     | 0.     | 0.     | 0.     |

| AIJ 5B | 53 P67        | 54 P68        | 55 P69 | 56 P72        |
|--------|---------------|---------------|--------|---------------|
| 51 P63 | 0.            | 0.            | 0.     | 0.            |
| 52 P64 | 0.            | 0.            | 0.     | 0.            |
| 53 P67 | 1.6966000E 01 | 0.            | 0.     | 0.            |
| 54 P68 | 0.            | 1.7184000E 01 | 0.     | 0.            |
| 55 P69 | 0.            | 0.            | 0.     | 0.            |
| 56 P72 | 0.            | 0.            | 0.     | 1.6288000E 01 |
| 57 P73 | 0.            | 0.            | 0.     | 0.            |
| 58 P74 | 0.            | 0.            | 0.     | 0.            |
| 59 P77 | 0.            | 0.            | 0.     | 0.            |
| 60 P79 | 0.            | 0.            | 0.     | 0.            |
| 61 P80 | 0.            | 0.            | 0.     | 0.            |
| 62 P81 | 0.            | 0.            | 0.     | 0.            |
| 63 P82 | 0.            | 0.            | 0.     | 0.            |
| 64 P83 | 0.            | 0.            | 0.     | 0.            |
| 65 P84 | 0.            | 0.            | 0.     | 0.            |
| 66 P93 | 0.            | 0.            | 0.     | 0.            |
| 67 P94 | 0.            | 0.            | 0.     | 0.            |
| 68 P95 | 0.            | 0.            | 0.     | 0.            |
| 69 P96 | 0.            | 0.            | 0.     | 0.            |
| 70 P97 | 0.            | 0.            | 0.     | 0.            |
| 71 Q19 | 0.            | 0.            | 0.     | 0.            |
| 72 Q20 | 0.            | 0.            | 0.     | 0.            |
| 73 Q21 | 0.            | 0.            | 0.     | 0.            |
| 74 Q22 | 0.            | 0.            | 0.     | 0.            |
| 75 Q23 | 0.            | 0.            | 0.     | 0.            |
| 76 Q24 | 0.            | 0.            | 0.     | 0.            |
| 77 Q26 | 0.            | 0.            | 0.     | 0.            |
| 78 Q28 | 0.            | 0.            | 0.     | 0.            |

| AIJ 5B | 57 P73 | 58 P74 | 59 P77 | 60 P79 |
|--------|--------|--------|--------|--------|
| 1 Q1   | 0.     | 0.     | 0.     | 0.     |
| 2 Q2   | 0.     | 0.     | 0.     | 0.     |
| 3 Q3   | 0.     | 0.     | 0.     | 0.     |
| 4 Q4   | 0.     | 0.     | 0.     | 0.     |
| 5 Q5   | 0.     | 0.     | 0.     | 0.     |
| 6 Q6   | 0.     | 0.     | 0.     | 0.     |
| 7 Q7   | 0.     | 0.     | 0.     | 0.     |
| 8 Q8   | 0.     | 0.     | 0.     | 0.     |
| 9 Q9   | 0.     | 0.     | 0.     | 0.     |
| 10 Q10 | 0.     | 0.     | 0.     | 0.     |
| 11 Q11 | 0.     | 0.     | 0.     | 0.     |
| 12 Q12 | 0.     | 0.     | 0.     | 0.     |
| 13 Q13 | 0.     | 0.     | 0.     | 0.     |
| 14 Q14 | 0.     | 0.     | 0.     | 0.     |
| 15 Q15 | 0.     | 0.     | 0.     | 0.     |
| 16 Q16 | 0.     | 0.     | 0.     | 0.     |
| 17 Q17 | 0.     | 0.     | 0.     | 0.     |
| 18 Q18 | 0.     | 0.     | 0.     | 0.     |
| 19 Q25 | 0.     | 0.     | 0.     | 0.     |
| 20 Q30 | 0.     | 0.     | 0.     | 0.     |
| 21 Q31 | 0.     | 0.     | 0.     | 0.     |
| 22 Q32 | 0.     | 0.     | 0.     | 0.     |
| 23 Q33 | 0.     | 0.     | 0.     | 0.     |
| 24 Q34 | 0.     | 0.     | 0.     | 0.     |
| 25 Q35 | 0.     | 0.     | 0.     | 0.     |
| 26 Q36 | 0.     | 0.     | 0.     | 0.     |
| 27 Q37 | 0.     | 0.     | 0.     | 0.     |
| 28 Q38 | 0.     | 0.     | 0.     | 0.     |
| 29 P40 | 0.     | 0.     | 0.     | 0.     |
| 30 P41 | 0.     | 0.     | 0.     | 0.     |
| 31 P42 | 0.     | 0.     | 0.     | 0.     |
| 32 P43 | 0.     | 0.     | 0.     | 0.     |
| 33 P44 | 0.     | 0.     | 0.     | 0.     |
| 34 P45 | 0.     | 0.     | 0.     | 0.     |
| 35 P46 | 0.     | 0.     | 0.     | 0.     |
| 36 P47 | 0.     | 0.     | 0.     | 0.     |
| 37 P48 | 0.     | 0.     | 0.     | 0.     |
| 38 P49 | 0.     | 0.     | 0.     | 0.     |
| 39 P50 | 0.     | 0.     | 0.     | 0.     |
| 40 P51 | 0.     | 0.     | 0.     | 0.     |
| 41 P52 | 0.     | 0.     | 0.     | 0.     |
| 42 P53 | 0.     | 0.     | 0.     | 0.     |
| 43 P54 | 0.     | 0.     | 0.     | 0.     |
| 44 P55 | 0.     | 0.     | 0.     | 0.     |
| 45 P56 | 0.     | 0.     | 0.     | 0.     |
| 46 P57 | 0.     | 0.     | 0.     | 0.     |
| 47 P58 | 0.     | 0.     | 0.     | 0.     |
| 48 P59 | 0.     | 0.     | 0.     | 0.     |
| 49 P60 | 0.     | 0.     | 0.     | 0.     |
| 50 P62 | 0.     | 0.     | 0.     | 0.     |



| AIJ 5B | 57 P73        | 58 P74 | 59 P77        | 60 P79        |
|--------|---------------|--------|---------------|---------------|
| 51 P63 | 0.            | 0.     | 0.            | 0.            |
| 52 P64 | 0.            | 0.     | 0.            | 0.            |
| 53 P67 | 0.            | 0.     | 0.            | 0.            |
| 54 P68 | 0.            | 0.     | 0.            | 0.            |
| 55 P69 | 0.            | 0.     | 0.            | 0.            |
| 56 P72 | 0.            | 0.     | 0.            | 0.            |
| 57 P73 | 1.7430000E 01 | 0.     | 0.            | 0.            |
| 58 P74 | 0.            | 0.     | 0.            | 0.            |
| 59 P77 | 0.            | 0.     | 2.3086000E 01 | 1.2411000E 01 |
| 60 P79 | 0.            | 0.     | 1.2411000E 01 | 2.6904000E 01 |
| 61 P80 | 0.            | 0.     | 0.            | 0.            |
| 62 P81 | 0.            | 0.     | 0.            | 0.            |
| 63 P82 | 0.            | 0.     | 0.            | 0.            |
| 64 P83 | 0.            | 0.     | 0.            | 0.            |
| 65 P84 | 0.            | 0.     | 0.            | 0.            |
| 66 P93 | 0.            | 0.     | 0.            | 0.            |
| 67 P94 | 0.            | 0.     | 0.            | 0.            |
| 68 P95 | 0.            | 0.     | 0.            | 0.            |
| 69 P96 | 0.            | 0.     | 0.            | 0.            |
| 70 P97 | 0.            | 0.     | 0.            | 0.            |
| 71 Q19 | 0.            | 0.     | 0.            | 0.            |
| 72 Q20 | 0.            | 0.     | 0.            | 0.            |
| 73 Q21 | 0.            | 0.     | 0.            | 0.            |
| 74 Q22 | 0.            | 0.     | 0.            | 0.            |
| 75 Q23 | 0.            | 0.     | 0.            | 0.            |
| 76 Q24 | 0.            | 0.     | 0.            | 0.            |
| 77 Q26 | 0.            | 0.     | 0.            | 0.            |
| 78 Q28 | 0.            | 0.     | 0.            | 0.            |

| AIJ 58 | 61 P80 | 62 P81 | 63 P82 | 64 P83 |
|--------|--------|--------|--------|--------|
| 1 Q1   | 0.     | 0.     | 0.     | 0.     |
| 2 Q2   | 0.     | 0.     | 0.     | 0.     |
| 3 Q3   | 0.     | 0.     | 0.     | 0.     |
| 4 Q4   | 0.     | 0.     | 0.     | 0.     |
| 5 Q5   | 0.     | 0.     | 0.     | 0.     |
| 6 Q6   | 0.     | 0.     | 0.     | 0.     |
| 7 Q7   | 0.     | 0.     | 0.     | 0.     |
| 8 Q8   | 0.     | 0.     | 0.     | 0.     |
| 9 Q9   | 0.     | 0.     | 0.     | 0.     |
| 10 Q10 | 0.     | 0.     | 0.     | 0.     |
| 11 Q11 | 0.     | 0.     | 0.     | 0.     |
| 12 Q12 | 0.     | 0.     | 0.     | 0.     |
| 13 Q13 | 0.     | 0.     | 0.     | 0.     |
| 14 Q14 | 0.     | 0.     | 0.     | 0.     |
| 15 Q15 | 0.     | 0.     | 0.     | 0.     |
| 16 Q16 | 0.     | 0.     | 0.     | 0.     |
| 17 Q17 | 0.     | 0.     | 0.     | 0.     |
| 18 Q18 | 0.     | 0.     | 0.     | 0.     |
| 19 Q25 | 0.     | 0.     | 0.     | 0.     |
| 20 Q30 | 0.     | 0.     | 0.     | 0.     |
| 21 Q31 | 0.     | 0.     | 0.     | 0.     |
| 22 Q32 | 0.     | 0.     | 0.     | 0.     |
| 23 Q33 | 0.     | 0.     | 0.     | 0.     |
| 24 Q34 | 0.     | 0.     | 0.     | 0.     |
| 25 Q35 | 0.     | 0.     | 0.     | 0.     |
| 26 Q36 | 0.     | 0.     | 0.     | 0.     |
| 27 Q37 | 0.     | 0.     | 0.     | 0.     |
| 28 Q38 | 0.     | 0.     | 0.     | 0.     |
| 29 P40 | 0.     | 0.     | 0.     | 0.     |
| 30 P41 | 0.     | 0.     | 0.     | 0.     |
| 31 P42 | 0.     | 0.     | 0.     | 0.     |
| 32 P43 | 0.     | 0.     | 0.     | 0.     |
| 33 P44 | 0.     | 0.     | 0.     | 0.     |
| 34 P45 | 0.     | 0.     | 0.     | 0.     |
| 35 P46 | 0.     | 0.     | 0.     | 0.     |
| 36 P47 | 0.     | 0.     | 0.     | 0.     |
| 37 P48 | 0.     | 0.     | 0.     | 0.     |
| 38 P49 | 0.     | 0.     | 0.     | 0.     |
| 39 P50 | 0.     | 0.     | 0.     | 0.     |
| 40 P51 | 0.     | 0.     | 0.     | 0.     |
| 41 P52 | 0.     | 0.     | 0.     | 0.     |
| 42 P53 | 0.     | 0.     | 0.     | 0.     |
| 43 P54 | 0.     | 0.     | 0.     | 0.     |
| 44 P55 | 0.     | 0.     | 0.     | 0.     |
| 45 P56 | 0.     | 0.     | 0.     | 0.     |
| 46 P57 | 0.     | 0.     | 0.     | 0.     |
| 47 P58 | 0.     | 0.     | 0.     | 0.     |
| 48 P59 | 0.     | 0.     | 0.     | 0.     |
| 49 P60 | 0.     | 0.     | 0.     | 0.     |
| 50 P62 | 0.     | 0.     | 0.     | 0.     |

| AIJ 5B | 61 P80        | 62 P81 | 63 P82 | 64 P83 |
|--------|---------------|--------|--------|--------|
| 51 P63 | 0.            | 0.     | 0.     | 0.     |
| 52 P64 | 0.            | 0.     | 0.     | 0.     |
| 53 P67 | 0.            | 0.     | 0.     | 0.     |
| 54 P68 | 0.            | 0.     | 0.     | 0.     |
| 55 P69 | 0.            | 0.     | 0.     | 0.     |
| 56 P72 | 0.            | 0.     | 0.     | 0.     |
| 57 P73 | 0.            | 0.     | 0.     | 0.     |
| 58 P74 | 0.            | 0.     | 0.     | 0.     |
| 59 P77 | 0.            | 0.     | 0.     | 0.     |
| 60 P79 | 0.            | 0.     | 0.     | 0.     |
| 61 P80 | 2.7722000E 01 | 0.     | 0.     | 0.     |
| 62 P81 | 0.            | 0.     | 0.     | 0.     |
| 63 P82 | 0.            | 0.     | 0.     | 0.     |
| 64 P83 | 0.            | 0.     | 0.     | 0.     |
| 65 P84 | 0.            | 0.     | 0.     | 0.     |
| 66 P93 | 0.            | 0.     | 0.     | 0.     |
| 67 P94 | 0.            | 0.     | 0.     | 0.     |
| 68 P95 | 0.            | 0.     | 0.     | 0.     |
| 69 P96 | 0.            | 0.     | 0.     | 0.     |
| 70 P97 | 0.            | 0.     | 0.     | 0.     |
| 71 Q19 | 0.            | 0.     | 0.     | 0.     |
| 72 Q20 | 0.            | 0.     | 0.     | 0.     |
| 73 Q21 | 0.            | 0.     | 0.     | 0.     |
| 74 Q22 | 0.            | 0.     | 0.     | 0.     |
| 75 Q23 | 0.            | 0.     | 0.     | 0.     |
| 76 Q24 | 0.            | 0.     | 0.     | 0.     |
| 77 Q26 | 0.            | 0.     | 0.     | 0.     |
| 78 Q28 | 0.            | 0.     | 0.     | 0.     |

| AIJ 5B | 65 P84 | 66 P93 | 67 P94 | 68 P95 |
|--------|--------|--------|--------|--------|
| 1 Q1   | 0.     | 0.     | 0.     | 0.     |
| 2 Q2   | 0.     | 0.     | 0.     | 0.     |
| 3 Q3   | 0.     | 0.     | 0.     | 0.     |
| 4 Q4   | 0.     | 0.     | 0.     | 0.     |
| 5 Q5   | 0.     | 0.     | 0.     | 0.     |
| 6 Q6   | 0.     | 0.     | 0.     | 0.     |
| 7 Q7   | 0.     | 0.     | 0.     | 0.     |
| 8 Q8   | 0.     | 0.     | 0.     | 0.     |
| 9 Q9   | 0.     | 0.     | 0.     | 0.     |
| 10 Q10 | 0.     | 0.     | 0.     | 0.     |
| 11 Q11 | 0.     | 0.     | 0.     | 0.     |
| 12 Q12 | 0.     | 0.     | 0.     | 0.     |
| 13 Q13 | 0.     | 0.     | 0.     | 0.     |
| 14 Q14 | 0.     | 0.     | 0.     | 0.     |
| 15 Q15 | 0.     | 0.     | 0.     | 0.     |
| 16 Q16 | 0.     | 0.     | 0.     | 0.     |
| 17 Q17 | 0.     | 0.     | 0.     | 0.     |
| 18 Q18 | 0.     | 0.     | 0.     | 0.     |
| 19 Q25 | 0.     | 0.     | 0.     | 0.     |
| 20 Q30 | 0.     | 0.     | 0.     | 0.     |
| 21 Q31 | 0.     | 0.     | 0.     | 0.     |
| 22 Q32 | 0.     | 0.     | 0.     | 0.     |
| 23 Q33 | 0.     | 0.     | 0.     | 0.     |
| 24 Q34 | 0.     | 0.     | 0.     | 0.     |
| 25 Q35 | 0.     | 0.     | 0.     | 0.     |
| 26 Q36 | 0.     | 0.     | 0.     | 0.     |
| 27 Q37 | 0.     | 0.     | 0.     | 0.     |
| 28 Q38 | 0.     | 0.     | 0.     | 0.     |
| 29 P40 | 0.     | 0.     | 0.     | 0.     |
| 30 P41 | 0.     | 0.     | 0.     | 0.     |
| 31 P42 | 0.     | 0.     | 0.     | 0.     |
| 32 P43 | 0.     | 0.     | 0.     | 0.     |
| 33 P44 | 0.     | 0.     | 0.     | 0.     |
| 34 P45 | 0.     | 0.     | 0.     | 0.     |
| 35 P46 | 0.     | 0.     | 0.     | 0.     |
| 36 P47 | 0.     | 0.     | 0.     | 0.     |
| 37 P48 | 0.     | 0.     | 0.     | 0.     |
| 38 P49 | 0.     | 0.     | 0.     | 0.     |
| 39 P50 | 0.     | 0.     | 0.     | 0.     |
| 40 P51 | 0.     | 0.     | 0.     | 0.     |
| 41 P52 | 0.     | 0.     | 0.     | 0.     |
| 42 P53 | 0.     | 0.     | 0.     | 0.     |
| 43 P54 | 0.     | 0.     | 0.     | 0.     |
| 44 P55 | 0.     | 0.     | 0.     | 0.     |
| 45 P56 | 0.     | 0.     | 0.     | 0.     |
| 46 P57 | 0.     | 0.     | 0.     | 0.     |
| 47 P58 | 0.     | 0.     | 0.     | 0.     |
| 48 P59 | 0.     | 0.     | 0.     | 0.     |
| 49 P60 | 0.     | 0.     | 0.     | 0.     |
| 50 P62 | 0.     | 0.     | 0.     | 0.     |

| AIJ 5B | 65 P84 | 66 P93        | 67 P94        | 68 P95        |
|--------|--------|---------------|---------------|---------------|
| 51 P63 | 0.     | 0.            | 0.            | 0.            |
| 52 P64 | 0.     | 0.            | 0.            | 0.            |
| 53 P67 | 0.     | 0.            | 0.            | 0.            |
| 54 P68 | 0.     | 0.            | 0.            | 0.            |
| 55 P69 | 0.     | 0.            | 0.            | 0.            |
| 56 P72 | 0.     | 0.            | 0.            | 0.            |
| 57 P73 | 0.     | 0.            | 0.            | 0.            |
| 58 P74 | 0.     | 0.            | 0.            | 0.            |
| 59 P77 | 0.     | 0.            | 0.            | 0.            |
| 60 P79 | 0.     | 0.            | 0.            | 0.            |
| 61 P80 | 0.     | 0.            | 0.            | 0.            |
| 62 P81 | 0.     | 0.            | 0.            | 0.            |
| 63 P82 | 0.     | 0.            | 0.            | 0.            |
| 64 P83 | 0.     | 0.            | 0.            | 0.            |
| 65 P84 | 0.     | 0.            | 0.            | 0.            |
| 66 P93 | 0.     | 1.0827600E 02 | 1.9206000E 01 | 0.            |
| 67 P94 | 0.     | 1.9206000E 01 | 5.6701999E 01 | 9.6539999E 00 |
| 68 P95 | 0.     | 0.            | 9.6539999E 00 | 2.8734000E 01 |
| 69 P96 | 0.     | 0.            | 0.            | 0.            |
| 70 P97 | 0.     | 0.            | 0.            | 0.            |
| 71 Q19 | 0.     | 0.            | 0.            | 0.            |
| 72 Q20 | 0.     | 0.            | 0.            | 0.            |
| 73 Q21 | 0.     | 0.            | 0.            | 0.            |
| 74 Q22 | 0.     | 0.            | 0.            | 0.            |
| 75 Q23 | 0.     | 0.            | 0.            | 0.            |
| 76 Q24 | 0.     | 0.            | 0.            | 0.            |
| 77 Q26 | 0.     | 0.            | 0.            | 0.            |
| 78 Q28 | 0.     | 0.            | 0.            | 0.            |

| A1J 58 | 69 P96 | 70 P97 | 71 Q19 | 72 Q20 |
|--------|--------|--------|--------|--------|
| 1 Q1   | 0.     | 0.     | 0.     | 0.     |
| 2 Q2   | 0.     | 0.     | 0.     | 0.     |
| 3 Q3   | 0.     | 0.     | 0.     | 0.     |
| 4 Q4   | 0.     | 0.     | 0.     | 0.     |
| 5 Q5   | 0.     | 0.     | 0.     | 0.     |
| 6 Q6   | 0.     | 0.     | 0.     | 0.     |
| 7 Q7   | 0.     | 0.     | 0.     | 0.     |
| 8 Q8   | 0.     | 0.     | 0.     | 0.     |
| 9 Q9   | 0.     | 0.     | 0.     | 0.     |
| 10 Q10 | 0.     | 0.     | 0.     | 0.     |
| 11 Q11 | 0.     | 0.     | 0.     | 0.     |
| 12 Q12 | 0.     | 0.     | 0.     | 0.     |
| 13 Q13 | 0.     | 0.     | 0.     | 0.     |
| 14 Q14 | 0.     | 0.     | 0.     | 0.     |
| 15 Q15 | 0.     | 0.     | 0.     | 0.     |
| 16 Q16 | 0.     | 0.     | 0.     | 0.     |
| 17 Q17 | 0.     | 0.     | 0.     | 0.     |
| 18 Q18 | 0.     | 0.     | 0.     | 0.     |
| 19 Q25 | 0.     | 0.     | 0.     | 0.     |
| 20 Q30 | 0.     | 0.     | 0.     | 0.     |
| 21 Q31 | 0.     | 0.     | 0.     | 0.     |
| 22 Q32 | 0.     | 0.     | 0.     | 0.     |
| 23 Q33 | 0.     | 0.     | 0.     | 0.     |
| 24 Q34 | 0.     | 0.     | 0.     | 0.     |
| 25 Q35 | 0.     | 0.     | 0.     | 0.     |
| 26 Q36 | 0.     | 0.     | 0.     | 0.     |
| 27 Q37 | 0.     | 0.     | 0.     | 0.     |
| 28 Q38 | 0.     | 0.     | 0.     | 0.     |
| 29 P40 | 0.     | 0.     | 0.     | 0.     |
| 30 P41 | 0.     | 0.     | 0.     | 0.     |
| 31 P42 | 0.     | 0.     | 0.     | 0.     |
| 32 P43 | 0.     | 0.     | 0.     | 0.     |
| 33 P44 | 0.     | 0.     | 0.     | 0.     |
| 34 P45 | 0.     | 0.     | 0.     | 0.     |
| 35 P46 | 0.     | 0.     | 0.     | 0.     |
| 36 P47 | 0.     | 0.     | 0.     | 0.     |
| 37 P48 | 0.     | 0.     | 0.     | 0.     |
| 38 P49 | 0.     | 0.     | 0.     | 0.     |
| 39 P50 | 0.     | 0.     | 0.     | 0.     |
| 40 P51 | 0.     | 0.     | 0.     | 0.     |
| 41 P52 | 0.     | 0.     | 0.     | 0.     |
| 42 P53 | 0.     | 0.     | 0.     | 0.     |
| 43 P54 | 0.     | 0.     | 0.     | 0.     |
| 44 P55 | 0.     | 0.     | 0.     | 0.     |
| 45 P56 | 0.     | 0.     | 0.     | 0.     |
| 46 P57 | 0.     | 0.     | 0.     | 0.     |
| 47 P58 | 0.     | 0.     | 0.     | 0.     |
| 48 P59 | 0.     | 0.     | 0.     | 0.     |
| 49 P60 | 0.     | 0.     | 0.     | 0.     |
| 50 P62 | 0.     | 0.     | 0.     | 0.     |

| AIJ 58 | 69 P96 | 70 P97 | 71 Q19        | 72 Q20        |
|--------|--------|--------|---------------|---------------|
| 51 P63 | 0.     | 0.     | 0.            | 0.            |
| 52 P64 | 0.     | 0.     | 0.            | 0.            |
| 53 P67 | 0.     | 0.     | 0.            | 0.            |
| 54 P68 | 0.     | 0.     | 0.            | 0.            |
| 55 P69 | 0.     | 0.     | 0.            | 0.            |
| 56 P72 | 0.     | 0.     | 0.            | 0.            |
| 57 P73 | 0.     | 0.     | 0.            | 0.            |
| 58 P74 | 0.     | 0.     | 0.            | 0.            |
| 59 P77 | 0.     | 0.     | 0.            | 0.            |
| 60 P79 | 0.     | 0.     | 0.            | 0.            |
| 61 P80 | 0.     | 0.     | 0.            | 0.            |
| 62 P81 | 0.     | 0.     | 0.            | 0.            |
| 63 P82 | 0.     | 0.     | 0.            | 0.            |
| 64 P83 | 0.     | 0.     | 0.            | 0.            |
| 65 P84 | 0.     | 0.     | 0.            | 0.            |
| 66 P93 | 0.     | 0.     | 0.            | 0.            |
| 67 P94 | 0.     | 0.     | 0.            | 0.            |
| 68 P95 | 0.     | 0.     | 0.            | 0.            |
| 69 P96 | 0.     | 0.     | 0.            | 0.            |
| 70 P97 | 0.     | 0.     | 0.            | 0.            |
| 71 Q19 | 0.     | 0.     | 3.7486533E 04 | 0.            |
| 72 Q20 | 0.     | 0.     | 0.            | 3.5614092E 04 |
| 73 Q21 | 0.     | 0.     | 0.            | 0.            |
| 74 Q22 | 0.     | 0.     | 0.            | 0.            |
| 75 Q23 | 0.     | 0.     | 0.            | 0.            |
| 76 Q24 | 0.     | 0.     | 0.            | 0.            |
| 77 Q26 | 0.     | 0.     | 0.            | 0.            |
| 78 Q28 | 0.     | 0.     | 0.            | 0.            |

| A1J 5B | 73 Q21 | 74 Q22 | 75 Q23 | 76 Q24 |
|--------|--------|--------|--------|--------|
| 1 Q1   | 0.     | 0.     | 0.     | 0.     |
| 2 Q2   | 0.     | 0.     | 0.     | 0.     |
| 3 Q3   | 0.     | 0.     | 0.     | 0.     |
| 4 Q4   | 0.     | 0.     | 0.     | 0.     |
| 5 Q5   | 0.     | 0.     | 0.     | 0.     |
| 6 Q6   | 0.     | 0.     | 0.     | 0.     |
| 7 Q7   | 0.     | 0.     | 0.     | 0.     |
| 8 Q8   | 0.     | 0.     | 0.     | 0.     |
| 9 Q9   | 0.     | 0.     | 0.     | 0.     |
| 10 Q10 | 0.     | 0.     | 0.     | 0.     |
| 11 Q11 | 0.     | 0.     | 0.     | 0.     |
| 12 Q12 | 0.     | 0.     | 0.     | 0.     |
| 13 Q13 | 0.     | 0.     | 0.     | 0.     |
| 14 Q14 | 0.     | 0.     | 0.     | 0.     |
| 15 Q15 | 0.     | 0.     | 0.     | 0.     |
| 16 Q16 | 0.     | 0.     | 0.     | 0.     |
| 17 Q17 | 0.     | 0.     | 0.     | 0.     |
| 18 Q18 | 0.     | 0.     | 0.     | 0.     |
| 19 Q25 | 0.     | 0.     | 0.     | 0.     |
| 20 Q30 | 0.     | 0.     | 0.     | 0.     |
| 21 Q31 | 0.     | 0.     | 0.     | 0.     |
| 22 Q32 | 0.     | 0.     | 0.     | 0.     |
| 23 Q33 | 0.     | 0.     | 0.     | 0.     |
| 24 Q34 | 0.     | 0.     | 0.     | 0.     |
| 25 Q35 | 0.     | 0.     | 0.     | 0.     |
| 26 Q36 | 0.     | 0.     | 0.     | 0.     |
| 27 Q37 | 0.     | 0.     | 0.     | 0.     |
| 28 Q38 | 0.     | 0.     | 0.     | 0.     |
| 29 P40 | 0.     | 0.     | 0.     | 0.     |
| 30 P41 | 0.     | 0.     | 0.     | 0.     |
| 31 P42 | 0.     | 0.     | 0.     | 0.     |
| 32 P43 | 0.     | 0.     | 0.     | 0.     |
| 33 P44 | 0.     | 0.     | 0.     | 0.     |
| 34 P45 | 0.     | 0.     | 0.     | 0.     |
| 35 P46 | 0.     | 0.     | 0.     | 0.     |
| 36 P47 | 0.     | 0.     | 0.     | 0.     |
| 37 P48 | 0.     | 0.     | 0.     | 0.     |
| 38 P49 | 0.     | 0.     | 0.     | 0.     |
| 39 P50 | 0.     | 0.     | 0.     | 0.     |
| 40 P51 | 0.     | 0.     | 0.     | 0.     |
| 41 P52 | 0.     | 0.     | 0.     | 0.     |
| 42 P53 | 0.     | 0.     | 0.     | 0.     |
| 43 P54 | 0.     | 0.     | 0.     | 0.     |
| 44 P55 | 0.     | 0.     | 0.     | 0.     |
| 45 P56 | 0.     | 0.     | 0.     | 0.     |
| 46 P57 | 0.     | 0.     | 0.     | 0.     |
| 47 P58 | 0.     | 0.     | 0.     | 0.     |
| 48 P59 | 0.     | 0.     | 0.     | 0.     |
| 49 P60 | 0.     | 0.     | 0.     | 0.     |
| 50 P62 | 0.     | 0.     | 0.     | 0.     |



| AIJ 5B | 73 Q21        | 74 Q22        | 75 Q23        | 76 Q24        |
|--------|---------------|---------------|---------------|---------------|
| 51 P63 | 0.            | 0.            | 0.            | 0.            |
| 52 P64 | 0.            | 0.            | 0.            | 0.            |
| 53 P67 | 0.            | 0.            | 0.            | 0.            |
| 54 P68 | 0.            | 0.            | 0.            | 0.            |
| 55 P69 | 0.            | 0.            | 0.            | 0.            |
| 56 P72 | 0.            | 0.            | 0.            | 0.            |
| 57 P73 | 0.            | 0.            | 0.            | 0.            |
| 58 P74 | 0.            | 0.            | 0.            | 0.            |
| 59 P77 | 0.            | 0.            | 0.            | 0.            |
| 60 P79 | 0.            | 0.            | 0.            | 0.            |
| 61 P80 | 0.            | 0.            | 0.            | 0.            |
| 62 P81 | 0.            | 0.            | 0.            | 0.            |
| 63 P82 | 0.            | 0.            | 0.            | 0.            |
| 64 P83 | 0.            | 0.            | 0.            | 0.            |
| 65 P84 | 0.            | 0.            | 0.            | 0.            |
| 66 P93 | 0.            | 0.            | 0.            | 0.            |
| 67 P94 | 0.            | 0.            | 0.            | 0.            |
| 68 P95 | 0.            | 0.            | 0.            | 0.            |
| 69 P96 | 0.            | 0.            | 0.            | 0.            |
| 70 P97 | 0.            | 0.            | 0.            | 0.            |
| 71 Q19 | 0.            | 0.            | 0.            | 0.            |
| 72 Q20 | 0.            | 0.            | 0.            | 0.            |
| 73 Q21 | 4.1775324E 04 | 0.            | 0.            | 0.            |
| 74 Q22 | 0.            | 4.0748493E 04 | 0.            | 0.            |
| 75 Q23 | 0.            | 0.            | 4.4131989E 04 | 0.            |
| 76 Q24 | 0.            | 0.            | 0.            | 4.3784739E 04 |
| 77 Q26 | 0.            | 0.            | 0.            | 0.            |
| 78 Q28 | 0.            | 0.            | 0.            | 0.            |

| AIJ 58 | 77 Q26 | 78 Q28 |
|--------|--------|--------|
| 1 Q1   | 0.     | 0.     |
| 2 Q2   | 0.     | 0.     |
| 3 Q3   | 0.     | 0.     |
| 4 Q4   | 0.     | 0.     |
| 5 Q5   | 0.     | 0.     |
| 6 Q6   | 0.     | 0.     |
| 7 Q7   | 0.     | 0.     |
| 8 Q8   | 0.     | 0.     |
| 9 Q9   | 0.     | 0.     |
| 10 Q10 | 0.     | 0.     |
| 11 Q11 | 0.     | 0.     |
| 12 Q12 | 0.     | 0.     |
| 13 Q13 | 0.     | 0.     |
| 14 Q14 | 0.     | 0.     |
| 15 Q15 | 0.     | 0.     |
| 16 Q16 | 0.     | 0.     |
| 17 Q17 | 0.     | 0.     |
| 18 Q18 | 0.     | 0.     |
| 19 Q25 | 0.     | 0.     |
| 20 Q30 | 0.     | 0.     |
| 21 Q31 | 0.     | 0.     |
| 22 Q32 | 0.     | 0.     |
| 23 Q33 | 0.     | 0.     |
| 24 Q34 | 0.     | 0.     |
| 25 Q35 | 0.     | 0.     |
| 26 Q36 | 0.     | 0.     |
| 27 Q37 | 0.     | 0.     |
| 28 Q38 | 0.     | 0.     |
| 29 P40 | 0.     | 0.     |
| 30 P41 | 0.     | 0.     |
| 31 P42 | 0.     | 0.     |
| 32 P43 | 0.     | 0.     |
| 33 P44 | 0.     | 0.     |
| 34 P45 | 0.     | 0.     |
| 35 P46 | 0.     | 0.     |
| 36 P47 | 0.     | 0.     |
| 37 P48 | 0.     | 0.     |
| 38 P49 | 0.     | 0.     |
| 39 P50 | 0.     | 0.     |
| 40 P51 | 0.     | 0.     |
| 41 P52 | 0.     | 0.     |
| 42 P53 | 0.     | 0.     |
| 43 P54 | 0.     | 0.     |
| 44 P55 | 0.     | 0.     |
| 45 P56 | 0.     | 0.     |
| 46 P57 | 0.     | 0.     |
| 47 P58 | 0.     | 0.     |
| 48 P59 | 0.     | 0.     |
| 49 P60 | 0.     | 0.     |
| 50 P62 | 0.     | 0.     |

| AIJ 58 | 77 Q26        | 78 Q28        |
|--------|---------------|---------------|
| 51 P63 | 0.            | 0.            |
| 52 P64 | 0.            | 0.            |
| 53 P67 | 0.            | 0.            |
| 54 P68 | 0.            | 0.            |
| 55 P69 | 0.            | 0.            |
| 56 P72 | 0.            | 0.            |
| 57 P73 | 0.            | 0.            |
| 58 P74 | 0.            | 0.            |
| 59 P77 | 0.            | 0.            |
| 60 P79 | 0.            | 0.            |
| 61 P80 | 0.            | 0.            |
| 62 P81 | 0.            | 0.            |
| 63 P82 | 0.            | 0.            |
| 64 P83 | 0.            | 0.            |
| 65 P84 | 0.            | 0.            |
| 66 P93 | 0.            | 0.            |
| 67 P94 | 0.            | 0.            |
| 68 P95 | 0.            | 0.            |
| 69 P96 | 0.            | 0.            |
| 70 P97 | 0.            | 0.            |
| 71 Q19 | 0.            | 0.            |
| 72 Q20 | 0.            | 0.            |
| 73 Q21 | 0.            | 0.            |
| 74 Q22 | 0.            | 0.            |
| 75 Q23 | 0.            | 0.            |
| 76 Q24 | 0.            | 0.            |
| 77 Q26 | 4.5653970E 04 | 0.            |
| 78 Q28 | 0.            | 3.9557108E 04 |

## TRIPLE PRODUCT

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| TRIPLE | Q19            | Q20            | Q21            | Q22            |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 9.0331614E-02  | -4.1114001E-02 | 5.8257878E-03  | -1.0527705E-01 |
| Q20    | -4.1114001E-02 | 3.3330871E-02  | -1.2089513E-02 | 4.6114159E-02  |
| Q21    | 5.8257878E-03  | -1.2089513E-02 | 3.7201619E-02  | 1.5313172E-02  |
| Q22    | -1.0527705E-01 | 4.6114159E-02  | 1.5313172E-02  | 1.6532712E-01  |
| Q23    | 7.7789319E-03  | -1.0566766E-02 | 1.7334333E-02  | -9.2097956E-04 |
| Q24    | -9.5185134E-02 | 3.9864586E-02  | 9.5914478E-03  | 1.3987416E-01  |
| Q26    | -8.9091730E-02 | 3.7275145E-02  | 5.9208662E-03  | 1.2843358E-01  |
| Q28    | -1.4621266E-02 | 3.2823966E-03  | 3.0491470E-03  | 2.0242855E-02  |
| P100   | 5.3365337E-03  | -1.7193397E-03 | -3.8837492E-03 | -1.1285378E-02 |
| P101   | -1.9667555E-03 | 9.7551838E-04  | -9.2815945E-04 | 1.4239510E-03  |
| P102   | -8.7244533E-03 | 3.4690574E-03  | 1.8066333E-03  | 1.3183831E-02  |
| P103   | 5.5379794E-03  | -1.7396760E-03 | -2.5829262E-03 | -9.6016344E-03 |
| P104   | -9.8843059E-04 | 4.2813015E-04  | -5.3663953E-04 | 7.8903015E-04  |
| P105   | -7.2856694E-03 | 2.5158313E-03  | 1.4249642E-03  | 1.0835764E-02  |
| P106   | 5.1341435E-03  | -1.6889114E-03 | -1.3034288E-03 | -7.8821036E-03 |
| P107   | -4.1839595E-04 | 1.0809108E-04  | -1.4706232E-04 | 3.6356052E-04  |
| P108   | -5.8784744E-03 | 1.8750781E-03  | 1.0006404E-03  | 8.4583328E-03  |
| P109   | 4.4473764E-03  | -1.4652502E-03 | -6.7453502E-04 | -6.3927622E-03 |
| P110   | -8.9107319E-05 | -1.5439360E-05 | -1.1519468E-05 | 4.5978137E-05  |
| P111   | -4.5693943E-03 | 1.3791612E-03  | 7.0586575E-04  | 6.4277332E-03  |
| P112   | 4.2069738E-03  | -1.1740583E-03 | -7.0453305E-04 | -5.8963627E-03 |
| P113   | 3.6094976E-03  | -1.0398121E-03 | -5.7467012E-04 | -5.0642436E-03 |
| P114   | 2.2981812E-04  | -1.3313706E-04 | 1.7845725E-05  | -3.4615231E-04 |
| P115   | -3.3277338E-03 | 9.2304921E-04  | 5.2475084E-04  | 4.6100518E-03  |
| P116   | 2.2310577E-03  | -5.8866966E-04 | -3.4865441E-04 | -3.0701827E-03 |
| P117   | -2.1215460E-03 | 5.4162010E-04  | 3.2902297E-04  | 2.8869907E-03  |
| P118   | 1.0499337E-03  | -2.4703564E-04 | -1.6043970E-04 | -1.4114936E-03 |
| P119   | 1.1540647E-03  | -2.8114187E-04 | -1.7751664E-04 | -1.5621588E-03 |
| P120   | 2.7462032E-05  | -1.1225177E-05 | -4.8255742E-06 | -4.5529525E-05 |
| P121   | 2.9239771E-05  | -7.0685629E-06 | -4.4897043E-06 | -3.9434808E-05 |
| P122   | -1.1567487E-03 | 2.7505161E-04  | 1.7700745E-04  | 1.5515802E-03  |
| P123   | 4.6163905E-04  | -1.0708553E-04 | -7.0356990E-05 | -6.1890846E-04 |
| P124   | -4.7355068E-04 | 1.0736813E-04  | 7.1846552E-05  | 6.2937123E-04  |
| P125   | -9.8740034E-05 | 2.3029741E-05  | 1.5063847E-05  | 1.3251755E-04  |
| P126   | 1.0378209E-04  | -2.4343200E-05 | -1.5841508E-05 | -1.3883457E-04 |

| TRIPLE | Q23            | Q24            | Q26            | Q28            |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 7.7789319E-03  | -9.5185134E-02 | -8.9091730E-02 | -1.4621266E-02 |
| Q20    | -1.0566766E-02 | 3.9864586E-02  | 3.7275145E-02  | 3.2823966E-03  |
| Q21    | 1.7334333E-02  | 9.5914478E-03  | 5.9208662E-03  | 3.0491470E-03  |
| Q22    | -9.2097956E-04 | 1.3987416E-01  | 1.2843358E-01  | 2.0242855E-02  |
| Q23    | 2.3791394E-02  | 8.1430874E-06  | -4.6370343E-03 | 1.3843790E-03  |
| Q24    | 8.1430874E-06  | 1.3697248E-01  | 1.1849052E-01  | 1.8711365E-02  |
| Q26    | -4.6370343E-03 | 1.1849052E-01  | 1.2119517E-01  | 1.7941167E-02  |
| Q28    | 1.3843790E-03  | 1.8711365E-02  | 1.7941167E-02  | 1.2856416E-02  |
| P100   | -1.5851673E-03 | -9.9828287E-03 | -9.0935079E-03 | -1.5993293E-03 |
| P101   | -4.3139030E-04 | 1.2236142E-03  | 1.0020710E-03  | 2.5770278E-04  |
| P102   | 6.3619395E-04  | 1.1592881E-02  | 1.0343461E-02  | 1.9760054E-03  |
| P103   | -1.1150765E-03 | -8.6431698E-03 | -7.9489153E-03 | -1.5263088E-03 |
| P104   | -2.8827655E-04 | 7.0438361E-04  | 5.6488265E-04  | 1.2437901E-04  |
| P105   | 5.0902193E-04  | 9.7293552E-03  | 8.7846596E-03  | 1.7181020E-03  |
| P106   | -6.4498925E-04 | -7.3036745E-03 | -6.8044789E-03 | -1.4533274E-03 |
| P107   | -1.1687652E-04 | 3.3329228E-04  | 2.6989289E-04  | 1.5798766E-05  |
| P108   | 3.8182952E-04  | 7.8655272E-03  | 7.2255786E-03  | 1.4601424E-03  |
| P109   | -1.5986903E-04 | -5.9277586E-03 | -5.6595488E-03 | -1.3802480E-03 |
| P110   | -1.5347365E-05 | 6.3784626E-05  | 2.5804206E-06  | -8.8762226E-05 |
| P111   | 2.1899741E-04  | 5.9616916E-03  | 5.6660212E-03  | 1.2020883E-03  |
| P112   | -2.2405276E-04 | -5.4616623E-03 | -5.2042264E-03 | -1.5653524E-03 |
| P113   | -1.6255188E-04 | -4.6927425E-03 | -4.4660573E-03 | -1.3071258E-03 |
| P114   | 5.3430098E-05  | -3.2329914E-04 | -2.7295847E-04 | -1.3437822E-04 |
| P115   | 1.7341988E-04  | 4.2743701E-03  | 4.0386248E-03  | 9.4407506E-04  |
| P116   | -9.7207713E-05 | -2.8446267E-03 | -2.7064101E-03 | -8.3008232E-04 |
| P117   | 1.0835991E-04  | 2.6765960E-03  | 2.5271726E-03  | 6.3938956E-04  |
| P118   | -4.3933002E-05 | -1.3076067E-03 | -1.2436159E-03 | -2.5754024E-04 |
| P119   | -4.8870827E-05 | -1.4472448E-03 | -1.3765700E-03 | -3.9682823E-04 |
| P120   | 3.2798994E-06  | -4.1702589E-05 | -4.5041875E-05 | -3.9965383E-05 |
| P121   | -1.3543274E-06 | -3.6546425E-05 | -3.4626551E-05 | -9.9951631E-06 |
| P122   | 5.8130161E-05  | 1.4384276E-03  | 1.3573134E-03  | 3.6483872E-04  |
| P123   | -1.9224031E-05 | -5.7334645E-04 | -5.4526459E-04 | -1.6476135E-04 |
| P124   | 2.3551538E-05  | 5.8345235E-04  | 5.5035139E-04  | 1.5354684E-04  |
| P125   | 4.1193983E-06  | 1.2276286E-04  | 1.1675202E-04  | 3.1475273E-05  |
| P126   | -5.1996725E-06 | -1.2870843E-04 | -1.2143898E-04 | -3.3000342E-05 |

| TRIPLE | P100           | P101           | P102           | P103           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 5.3365337E-03  | -1.9667555E-03 | -8.7244533E-03 | 5.5379794E-03  |
| Q20    | -1.7193397E-03 | 9.7551838E-04  | 3.4690574E-03  | -1.7396760E-03 |
| Q21    | -3.8837492E-03 | -9.2815945E-04 | 1.8066333E-03  | -2.5829262E-03 |
| Q22    | -1.1285378E-02 | 1.4239510E-03  | 1.3183831E-02  | -9.6016344E-03 |
| Q23    | -1.5851673E-03 | -4.3139030E-04 | 6.3619395E-04  | -1.1150765E-03 |
| Q24    | -9.9828287E-03 | 1.2236142E-03  | 1.1592881E-02  | -8.6431698E-03 |
| Q26    | -9.0935079E-03 | 1.0020710E-03  | 1.0343461E-02  | -7.9489153E-03 |
| Q28    | -1.5993293E-03 | 2.5770278E-04  | 1.9760054E-03  | -1.5263088E-03 |
| P100   | 2.5463358E-03  | 1.4345877E-03  | 4.0589277E-04  | 1.9902612E-03  |
| P101   | 1.4345877E-03  | 1.4915887E-03  | 1.5443313E-03  | 1.1146360E-03  |
| P102   | 4.0589277E-04  | 1.5443313E-03  | 2.5977230E-03  | 3.0442438E-04  |
| P103   | 1.9902612E-03  | 1.1146360E-03  | 3.0442438E-04  | 1.6524016E-03  |
| P104   | 1.1554943E-03  | 1.1939334E-03  | 1.2295009E-03  | 9.4495473E-04  |
| P105   | 3.5290205E-04  | 1.2737772E-03  | 2.1258584E-03  | 2.6468036E-04  |
| P106   | 1.5237930E-03  | 8.3775179E-04  | 2.0296120E-04  | 1.3069139E-03  |
| P107   | 9.0510595E-04  | 9.3137246E-04  | 9.5567671E-04  | 7.6002892E-04  |
| P108   | 2.9991647E-04  | 1.0265374E-03  | 1.6988761E-03  | 2.2494067E-04  |
| P109   | 1.1466434E-03  | 6.0378507E-04  | 1.0148091E-04  | 1.0062854E-03  |
| P110   | 6.9610854E-04  | 7.0264625E-04  | 7.0869555E-04  | 5.9515911E-04  |
| P111   | 2.4691154E-04  | 8.0264947E-04  | 1.3168711E-03  | 1.8518643E-04  |
| P112   | 9.0453861E-04  | 3.8632245E-04  | -9.3180414E-05 | 8.1242847E-04  |
| P113   | 8.5050879E-04  | 4.0875633E-04  | 4.9419724E-09  | 7.6020229E-04  |
| P114   | 5.3193902E-04  | 5.0848780E-04  | 4.8678851E-04  | 4.6012056E-04  |
| P115   | 1.9391501E-04  | 5.9884553E-04  | 9.7352574E-04  | 1.4543848E-04  |
| P116   | 5.2303188E-04  | 2.5137023E-04  | 3.0389282E-09  | 4.7321554E-04  |
| P117   | 1.3133194E-04  | 3.8829138E-04  | 6.2605467E-04  | 9.8500477E-05  |
| P118   | 2.4465443E-04  | 1.1758144E-04  | 1.4213477E-09  | 2.2454203E-04  |
| P119   | 2.6939416E-04  | 1.2947141E-04  | 1.5651269E-09  | 2.4622017E-04  |
| P120   | 1.7679378E-04  | 1.7310638E-04  | 1.6969444E-04  | 1.5538989E-04  |
| P121   | 2.5149423E-06  | -1.0226783E-06 | -4.2960213E-06 | 2.4490137E-06  |
| P122   | 7.4938618E-05  | 2.1452485E-04  | 3.4368331E-04  | 5.6204839E-05  |
| P123   | 1.0749484E-04  | 5.1662247E-05  | 6.2448514E-10  | 9.8821900E-05  |
| P124   | 3.1538830E-05  | 8.8548980E-05  | 1.4130019E-04  | 2.3654494E-05  |
| P125   | -2.2998278E-05 | -1.1053021E-05 | -1.3360352E-10 | -2.1129317E-05 |
| P126   | -6.7783372E-06 | -1.9293305E-05 | -3.0873342E-05 | -5.0838323E-06 |

| TRIPLE | P104           | P105           | P106           | P107           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | -9.8843069E-04 | -7.2856694E-03 | 5.1341435E-03  | -4.1839595E-04 |
| Q20    | 4.2813015E-04  | 2.5158313E-03  | -1.6885114E-03 | 1.0809108E-04  |
| Q21    | -5.3663953E-04 | 1.4249642E-03  | -1.3034288E-03 | -1.4706232E-04 |
| Q22    | 7.8903015E-04  | 1.0835764E-02  | -7.8821036E-03 | 3.6356052E-04  |
| Q23    | -2.8827655E-04 | 5.0902193E-04  | -6.4498925E-04 | -1.1687652E-04 |
| Q24    | 7.0438361E-04  | 9.7293552E-03  | -7.3036745E-03 | 3.3329228E-04  |
| Q26    | 5.6488265E-04  | 8.7846596E-03  | -6.8044789E-03 | 2.6989289E-04  |
| Q28    | 1.2437901E-04  | 1.7181020E-03  | -1.4533274E-03 | 1.5798766E-05  |
| P100   | 1.1554943E-03  | 3.5290205E-04  | 1.5237930E-03  | 9.0510595E-04  |
| P101   | 1.1939334E-03  | 1.2737772E-03  | 8.3775179E-04  | 9.3137246E-04  |
| P102   | 1.2295009E-03  | 2.1258584E-03  | 2.0296120E-04  | 9.5567671E-04  |
| P103   | 9.4495473E-04  | 2.6468036E-04  | 1.3069139E-03  | 7.6002892E-04  |
| P104   | 1.0013644E-03  | 1.0417004E-03  | 7.3067577E-04  | 7.8912596E-04  |
| P105   | 1.0417004E-03  | 1.7946225E-03  | 1.7646270E-04  | 8.1939356E-04  |
| P106   | 7.3067577E-04  | 1.7646270E-04  | 1.0900600E-03  | 6.1496612E-04  |
| P107   | 7.8912596E-04  | 8.1939356E-04  | 6.1496612E-04  | 6.5865172E-04  |
| P108   | 8.4923738E-04  | 1.4542066E-03  | 1.4996820E-04  | 6.8309391E-04  |
| P109   | 5.3839145E-04  | 8.8229667E-05  | 8.6594851E-04  | 4.6630485E-04  |
| P110   | 6.0302419E-04  | 6.1228266E-04  | 4.9422156E-04  | 5.0427792E-04  |
| P111   | 5.6864465E-04  | 1.1371659E-03  | 1.2346400E-04  | 5.4308302E-04  |
| P112   | 3.5730865E-04  | -8.1022922E-05 | 7.2033655E-04  | 3.2183070E-04  |
| P113   | 3.7286212E-04  | 0.             | 6.6991267E-04  | 3.3153971E-04  |
| P114   | 4.4073956E-04  | 4.2324941E-04  | 3.8831164E-04  | 3.7325289E-04  |
| P115   | 5.0143543E-04  | 8.4645858E-04  | 9.6963996E-05  | 4.1012526E-04  |
| P116   | 2.3210157E-04  | 0.             | 4.2341009E-04  | 2.0954561E-04  |
| P117   | 3.2692168E-04  | 5.4831599E-04  | 6.5670378E-05  | 2.6938632E-04  |
| P118   | 1.1013281E-04  | 0.             | 2.0443501E-04  | 1.0117487E-04  |
| P119   | 1.2076545E-04  | 0.             | 2.2305202E-04  | 1.1038842E-04  |
| P120   | 1.5216057E-04  | 1.4946384E-04  | 1.3398940E-04  | 1.3136706E-04  |
| P121   | -7.2148021E-07 | -3.7838947E-06 | 2.3831501E-06  | -4.6755934E-07 |
| P122   | 1.8138052E-04  | 3.0271158E-04  | 3.7471830E-05  | 1.5030321E-04  |
| P123   | 4.8469918E-05  | 0.             | 9.0151347E-05  | 4.4615893E-05  |
| P124   | 7.5062144E-05  | 1.2489245E-04  | 1.5770478E-05  | 6.2415416E-05  |
| P125   | -1.0363455E-05 | 0.             | -1.9260864E-05 | -9.5321999E-06 |
| P126   | -1.6324859E-05 | -2.7220732E-05 | -3.3893968E-06 | -1.3541476E-05 |

| TRIPLE | P108           | P109           | P110           | P111           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | -5.8784744E-03 | 4.4473764E-03  | -8.9107319E-05 | -4.5693943E-03 |
| Q20    | 1.8750781E-03  | -1.4652502E-03 | -1.5439360E-05 | 1.3791612E-03  |
| Q21    | 1.0006404E-03  | -6.7453502E-04 | -1.1519468E-05 | 7.0586575E-04  |
| Q22    | 8.4583328E-03  | -6.3927622E-03 | 4.5978137E-05  | 6.4277332E-03  |
| Q23    | 3.8182952E-04  | -1.5986903E-04 | -1.5347365E-05 | 2.1899741E-04  |
| Q24    | 7.8655272E-03  | -5.9277586E-03 | 6.3784626E-05  | 5.9616916E-03  |
| Q26    | 7.2255786E-03  | -5.6595488E-03 | 2.5804206E-06  | 5.6660212E-03  |
| Q28    | 1.4601424E-03  | -1.3802480E-03 | -8.8762226E-05 | 1.2020883E-03  |
| P100   | 2.9991647E-04  | 1.1466434E-03  | 6.9610854E-04  | 2.4691154E-04  |
| P101   | 1.0265374E-03  | 6.0378507E-04  | 7.0264625E-04  | 8.0264947E-04  |
| P102   | 1.6988761E-03  | 1.0148091E-04  | 7.0869555E-04  | 1.3168711E-03  |
| P103   | 2.2494067E-04  | 1.0062854E-03  | 5.9515911E-04  | 1.8518643E-04  |
| P104   | 8.4923738E-04  | 5.3839145E-04  | 6.0302419E-04  | 6.6864465E-04  |
| P105   | 1.4542066E-03  | 8.8229667E-05  | 6.1228266E-04  | 1.1371659E-03  |
| P106   | 1.4996820E-04  | 8.6574851E-04  | 4.9422156E-04  | 1.2346400E-04  |
| P107   | 6.8309391E-04  | 4.6630485E-04  | 5.0427792E-04  | 5.4308302E-04  |
| P108   | 1.2095004E-03  | 7.4982670E-05  | 5.1585727E-04  | 9.5743164E-04  |
| P109   | 7.4982670E-05  | 7.2554901E-04  | 3.9324738E-04  | 6.1730825E-05  |
| P110   | 5.1585727E-04  | 3.9324738E-04  | 4.1418471E-04  | 4.1939835E-04  |
| P111   | 9.5743164E-04  | 6.1730825E-05  | 4.1939835E-04  | 7.7763511E-04  |
| P112   | -6.8857962E-05 | 6.2819361E-04  | 2.8544849E-04  | -5.6688549E-05 |
| P113   | 0.             | 5.7957538E-04  | 2.8949017E-04  | 0.             |
| P114   | 3.5970181E-04  | 3.1647425E-04  | 3.0604382E-04  | 2.9613095E-04  |
| P115   | 7.1936942E-04  | 4.8481074E-05  | 3.2013990E-04  | 5.9223375E-04  |
| P116   | 0.             | 3.7357484E-04  | 1.8659565E-04  | 0.             |
| P117   | 4.7056284E-04  | 3.2834564E-05  | 2.1266239E-04  | 3.9277943E-04  |
| P118   | 0.             | 1.8431378E-04  | 9.2062274E-05  | 0.             |
| P119   | 0.             | 1.9986830E-04  | 9.9831547E-05  | 0.             |
| P120   | 1.2923007E-04  | 1.1257924E-04  | 1.1069039E-04  | 1.0898802E-04  |
| P121   | -3.2716473E-06 | 2.3171281E-06  | -2.2132321E-07 | -2.7591904E-06 |
| P122   | 2.6173178E-04  | 1.8735558E-05  | 1.1965398E-04  | 2.2073523E-04  |
| P123   | 0.             | 8.1474534E-05  | 4.0695442E-05  | 0.             |
| P124   | 1.0848137E-04  | 7.8850886E-06  | 4.9940227E-05  | 9.2063346E-05  |
| P125   | 0.             | -1.7391073E-05 | -8.6866088E-06 | 0.             |
| P126   | -2.3567395E-05 | -1.6946661E-06 | -1.0796262E-05 | -1.9912549E-05 |



| TRIPLE | P112           | P113           | P114           | P115           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 4.2069738E-03  | 3.6094976E-03  | 2.2981812E-04  | -3.3277338E-03 |
| Q20    | -1.1740583E-03 | -1.0398121E-03 | -1.3313706E-04 | 9.2304921E-04  |
| Q21    | -7.0453305E-04 | -5.7467012E-04 | 1.7845725E-05  | 5.2475084E-04  |
| Q22    | -5.8963627E-04 | -5.0642436E-03 | -3.4615231E-04 | 4.6100518E-03  |
| Q23    | -2.2405276E-04 | -1.6255188E-04 | 5.3430098E-05  | 1.7341988E-04  |
| Q24    | -5.4616623E-03 | -4.6927425E-03 | -3.2329914E-04 | 4.2743701E-03  |
| Q26    | -5.2042264E-03 | -4.4660573E-03 | -2.7295847E-04 | 4.0386248E-03  |
| Q28    | -1.5653524E-03 | -1.3071258E-03 | -1.3437822E-04 | 9.4407506E-04  |
| P100   | 9.0453861E-04  | 8.5050879E-04  | 5.3193902E-04  | 1.9391501E-04  |
| P101   | 3.8632245E-04  | 4.0875633E-04  | 5.0848780E-04  | 5.9884553E-04  |
| P102   | -9.3180414E-05 | 4.9419724E-09  | 4.8678851E-04  | 9.7352574E-04  |
| P103   | 8.1242847E-04  | 7.6020229E-04  | 4.6012056E-04  | 1.4544848E-04  |
| P104   | 3.5730865E-04  | 3.7286212E-04  | 4.4073956E-04  | 5.0143543E-04  |
| P105   | -8.1022922E-05 | 0.             | 4.2324941E-04  | 8.4645858E-04  |
| P106   | 7.2033655E-04  | 6.6991267E-04  | 3.8831164E-04  | 9.6963996E-05  |
| P107   | 3.2183070E-04  | 3.3153971E-04  | 3.7325289E-04  | 4.1012526E-04  |
| P108   | -6.8857962E-05 | 0.             | 3.5970181E-04  | 7.1936942E-04  |
| P109   | 6.2819361E-04  | 5.7957538E-04  | 3.1647425E-04  | 4.8481074E-05  |
| P110   | 2.8544849E-04  | 2.8949017E-04  | 3.0604382E-04  | 3.2013990E-04  |
| P111   | -5.6688549E-05 | 0.             | 2.9613095E-04  | 5.9223375E-04  |
| P112   | 5.9360502E-04  | 5.3603557E-04  | 2.4355212E-04  | -4.4521059E-05 |
| P113   | 5.3603557E-04  | 4.8922455E-04  | 2.4463110E-04  | 0.             |
| P114   | 2.4355212E-04  | 2.4463110E-04  | 2.4962876E-04  | 2.3257014E-04  |
| P115   | -4.4521059E-05 | 0.             | 2.3257014E-04  | 4.6511816E-04  |
| P116   | 3.5470608E-04  | 3.2373024E-04  | 1.6187757E-04  | 0.             |
| P117   | -3.0152582E-05 | 0.             | 1.5751175E-04  | 3.1500853E-04  |
| P118   | 1.7989776E-04  | 1.6418762E-04  | 8.2100124E-05  | 0.             |
| P119   | 1.9358473E-04  | 1.7667932E-04  | 8.8346456E-05  | 0.             |
| P120   | 9.1394864E-05  | 9.1166730E-05  | 8.9963617E-05  | 8.8749274E-05  |
| P121   | 2.6814833E-06  | 2.2510304E-06  | 2.1398655E-09  | -2.2468170E-06 |
| P122   | -1.7205206E-05 | 0.             | 8.9876955E-05  | 1.7974536E-04  |
| P123   | 7.9760896E-05  | 7.2795523E-05  | 3.6400561E-05  | 0.             |
| P124   | -7.2410215E-06 | 0.             | 3.7825815E-05  | 7.5648034E-05  |
| P125   | -1.7005909E-05 | -1.5520814E-05 | -7.7610041E-06 | 0.             |
| P126   | 1.5562429E-06  | 0.             | -8.1295377E-06 | -1.6258302E-05 |

| TRIPLE | P116           | P117           | P118           | P119           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 2.2310577E-03  | -2.1215460E-03 | 1.0499337E-03  | 1.1540647E-03  |
| Q20    | -5.3866966E-04 | 5.4162010E-04  | -2.4703564E-04 | -2.8114187E-04 |
| Q21    | -3.4865441E-04 | 3.2902297E-04  | -1.6043970E-04 | -1.7751664E-04 |
| Q22    | -3.0701827E-03 | 2.8869907E-03  | -1.4114936E-03 | -1.5621588E-03 |
| Q23    | -9.7207713E-05 | 1.0835991E-04  | -4.3933002E-05 | -4.8870827E-05 |
| Q24    | -2.8446267E-03 | 2.6765960E-03  | -1.3076067E-03 | -1.4472448E-03 |
| Q26    | -2.7064101E-03 | 2.5271726E-03  | -1.2436159E-03 | -1.3765700E-03 |
| Q28    | -8.3008232E-04 | 6.3938956E-04  | -2.5754024E-04 | -3.9682823E-04 |
| P100   | 5.2303188E-04  | 1.3133194E-04  | 2.4465443E-04  | 2.6939416E-04  |
| P101   | 2.5137023E-04  | 3.8829138E-04  | 1.1758144E-04  | 1.2947141E-04  |
| P102   | 3.0389282E-09  | 6.2605467E-04  | 1.4213477E-09  | 1.5651269E-09  |
| P103   | 4.7321554E-04  | 9.8500477E-05  | 2.2454203E-04  | 2.4622017E-04  |
| P104   | 2.3210157E-04  | 3.2692168E-04  | 1.1013281E-04  | 1.2076545E-04  |
| P105   | 0.             | 5.4831599E-04  | 0.             | 0.             |
| P106   | 4.2341009E-04  | 6.5670378E-05  | 2.0443501E-04  | 2.2305202E-04  |
| P107   | 2.0954561E-04  | 2.6938632E-04  | 1.0117487E-04  | 1.1038842E-04  |
| P108   | 0.             | 4.7056284E-04  | 0.             | 0.             |
| P109   | 3.7357484E-04  | 3.2834564E-05  | 1.8431378E-04  | 1.9986830E-04  |
| P110   | 1.8659565E-04  | 2.1266239E-04  | 9.2062274E-05  | 9.9831547E-05  |
| P111   | 0.             | 3.9277943E-04  | 0.             | 0.             |
| P112   | 3.5470608E-04  | -3.0152582E-05 | 1.7989776E-04  | 1.9358473E-04  |
| P113   | 3.2373024E-04  | 0.             | 1.6418762E-04  | 1.7667932E-04  |
| P114   | 1.6187757E-04  | 1.5751175E-04  | 8.2100124E-05  | 8.8346456E-05  |
| P115   | 0.             | 3.1500853E-04  | 0.             | 0.             |
| P116   | 2.2785886E-04  | 0.             | 1.2147741E-04  | 1.2896235E-04  |
| P117   | 0.             | 2.2581228E-04  | 0.             | 0.             |
| P118   | 1.2147741E-04  | 0.             | 8.3646679E-05  | 7.8764924E-05  |
| P119   | 1.2896235E-04  | 0.             | 7.8764924E-05  | 8.1242832E-05  |
| P120   | 6.6319490E-05  | 6.5538315E-05  | 3.9201465E-05  | 4.1470930E-05  |
| P121   | 1.6375183E-06  | -1.6591978E-06 | 9.6793742E-07  | 1.0239736E-06  |
| P122   | 0.             | 1.3273582E-04  | 0.             | 0.             |
| P123   | 5.4139472E-05  | 0.             | 3.4380074E-05  | 3.5482430E-05  |
| P124   | 0.             | 5.6822588E-05  | 0.             | 0.             |
| P125   | -1.1520422E-05 | 0.             | -7.5207774E-06 | -7.5198173E-06 |
| P126   | 0.             | -1.2067439E-05 | 0.             | 0.             |

| TRIPLE | P120           | P121           | P122           | P123           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 2.7462032E-05  | 2.9239771E-05  | -1.1567487E-03 | 4.6163905E-04  |
| Q20    | -1.1225177E-05 | -7.0685629E-06 | 2.7505161E-04  | -1.0708553E-04 |
| Q21    | -4.8255742E-06 | -4.4897043E-06 | 1.7700745E-04  | -7.0356990E-05 |
| Q22    | -4.5529525E-05 | -3.9434808E-05 | 1.5515802E-03  | -6.1890846E-04 |
| Q23    | 3.2798994E-06  | -1.3543274E-06 | 5.8130161E-05  | -1.9224031E-05 |
| Q24    | -4.1702589E-05 | -3.6546425E-05 | 1.4384276E-03  | -5.7334645E-04 |
| Q26    | -4.5041875E-05 | -3.4626551E-05 | 1.3573334E-03  | -5.4526459E-04 |
| Q28    | -3.9765383E-05 | -9.9951631E-06 | 3.6483872E-04  | -1.6476135E-04 |
| P100   | 1.7679378E-04  | 2.5149423E-06  | 7.4938618E-05  | 1.0749484E-04  |
| P101   | 1.7310638E-04  | -1.0226783E-06 | 2.1452485E-04  | 5.1662247E-05  |
| P102   | 1.6969444E-04  | -4.2960213E-06 | 3.4368331E-04  | 6.2448514E-10  |
| P103   | 1.5538989E-04  | 2.4490137E-06  | 5.6204839E-05  | 9.8821900E-05  |
| P104   | 1.5216057E-04  | -7.2148021E-07 | 1.8138052E-04  | 4.8469918E-05  |
| P105   | 1.4946384E-04  | -3.7838947E-06 | 3.0271158E-04  | 0.             |
| P106   | 1.3398940E-04  | 2.3831501E-06  | 3.7471830E-05  | 9.0151347E-05  |
| P107   | 1.3136706E-04  | -4.6755934E-07 | 1.5030321E-04  | 4.4615893E-05  |
| P108   | 1.2923007E-04  | -3.2716473E-06 | 2.6173178E-04  | 0.             |
| P109   | 1.1257924E-04  | 2.3171281E-06  | 1.8735558E-05  | 8.1474534E-05  |
| P110   | 1.1069039E-04  | -2.2132321E-07 | 1.1965398E-04  | 4.0695442E-05  |
| P111   | 1.0898802E-04  | -2.7591904E-06 | 2.2073523E-04  | 0.             |
| P112   | 9.1394864E-05  | 2.6814833E-06  | -1.7205206E-05 | 7.9760896E-05  |
| P113   | 9.1166730E-05  | 2.2510304E-06  | 0.             | 7.2795523E-05  |
| P114   | 8.9963617E-05  | 2.1398655E-09  | 8.9876955E-05  | 3.6400561E-05  |
| P115   | 8.8749274E-05  | -2.2468170E-06 | 1.7974536E-04  | 0.             |
| P116   | 6.6319490E-05  | 1.6375183E-06  | 0.             | 5.4139472E-05  |
| P117   | 6.5538315E-05  | -1.6591978E-06 | 1.3273582E-04  | 0.             |
| P118   | 3.9201465E-05  | 9.6793742E-07  | 0.             | 3.4380074E-05  |
| P119   | 4.1470930E-05  | 1.0239736E-06  | 0.             | 3.5482430E-05  |
| P120   | 4.2206209E-05  | -2.9622842E-09 | 4.2326182E-05  | 1.8115014E-05  |
| P121   | -2.9622842E-09 | 2.6384855E-08  | -1.0715489E-06 | 4.4728431E-07  |
| P122   | 4.2326182E-05  | -1.0715489E-06 | 8.5723914E-05  | 0.             |
| P123   | 1.8115014E-05  | 4.4728431E-07  | 0.             | 1.8656313E-05  |
| P124   | 1.8760619E-05  | -4.7495237E-07 | 3.7996190E-05  | 0.             |
| P125   | -3.8067751E-06 | -9.3994449E-08 | 0.             | -3.7599085E-06 |
| P126   | -3.8889539E-06 | 9.8454528E-08  | -7.8763623E-06 | 0.             |

| TRIPLE | P124           | P125           | P126           |
|--------|----------------|----------------|----------------|
| Q19    | -4.7355068E-04 | -9.8740034E-05 | 1.0378209E-04  |
| Q20    | 1.0736813E-04  | 2.3029741E-05  | -2.4343200E-05 |
| Q21    | 7.1846552E-05  | 1.5063847E-05  | -1.5841508E-05 |
| Q22    | 6.2937123E-04  | 1.3251755E-04  | -1.3883457E-04 |
| Q23    | 2.3551538E-05  | 4.1193983E-06  | -5.1996725E-06 |
| Q24    | 5.8345235E-04  | 1.2276286E-04  | -1.2870843E-04 |
| Q26    | 5.5035139E-04  | 1.1675202E-04  | -1.2143898E-04 |
| Q28    | 1.5354684E-04  | 3.1475273E-05  | -3.3000342E-05 |
| P100   | 3.1538830E-05  | -2.2998278E-05 | -6.7783372E-06 |
| P101   | 8.8548980E-05  | -1.1053021E-05 | -1.9293305E-05 |
| P102   | 1.4130019E-04  | -1.3360352E-10 | -3.0873342E-05 |
| P103   | 2.3654494E-05  | -2.1129317E-05 | -5.0838323E-06 |
| P104   | 7.5062144E-05  | -1.0363455E-05 | -1.6324859E-05 |
| P105   | 1.2489245E-04  | 0.             | -2.7220732E-05 |
| P106   | 1.5770478E-05  | -1.9260864E-05 | -3.3893968E-06 |
| P107   | 6.2415416E-05  | -9.5321999E-06 | -1.3541476E-05 |
| P108   | 1.0848137E-04  | 0.             | -2.3567395E-05 |
| P109   | 7.8850886E-06  | -1.7391073E-05 | -1.6946661E-06 |
| P110   | 4.9940227E-05  | -8.6866088E-06 | -1.0796262E-05 |
| P111   | 9.2063346E-05  | 0.             | -1.9912549E-05 |
| P112   | -7.2410215E-06 | -1.7005909E-05 | 1.5562429E-06  |
| P113   | 0.             | -1.5520814E-05 | 0.             |
| P114   | 3.7825815E-05  | -7.7610041E-06 | -8.1295377E-06 |
| P115   | 7.5648034E-05  | 0.             | -1.6258302E-05 |
| P116   | 0.             | -1.1520422E-05 | 0.             |
| P117   | 5.6822588E-05  | 0.             | -1.2067439E-05 |
| P118   | 0.             | -7.5207774E-06 | 0.             |
| P119   | 0.             | -7.5198173E-06 | 0.             |
| P120   | 1.8760619E-05  | -3.8067751E-06 | -3.8889539E-06 |
| P121   | -4.7495237E-07 | -9.3994449E-08 | 9.8454528E-08  |
| P122   | 3.7996190E-05  | 0.             | -7.8763623E-06 |
| P123   | 0.             | -3.7599085E-06 | 0.             |
| P124   | 2.0305800E-05  | 0.             | -3.9381811E-06 |
| P125   | 0.             | 3.2792894E-06  | 0.             |
| P126   | -3.9381811E-06 | 0.             | 3.5310873E-06  |

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| (GRN) | Q19            | Q20            | Q21            | Q22            |
|-------|----------------|----------------|----------------|----------------|
| P100  | 6.7373071E-02  | 2.5312480E-02  | 6.1282480E-02  | 3.8031001E-02  |
| P101  | 4.6700346E-02  | 1.0828761E-02  | 1.9927819E-02  | -5.9340299E-03 |
| P102  | 2.7571951E-02  | -2.5729425E-03 | -1.8337435E-02 | -4.6614674E-02 |
| P103  | 7.1411231E-03  | 9.6370000E-05  | 4.0486123E-02  | 1.7272121E-02  |
| P104  | 2.1272686E-02  | 1.4758569E-02  | 1.5379736E-02  | -7.0560535E-03 |
| P105  | 3.4224814E-02  | 2.9734956E-02  | -7.3879573E-03 | -3.2185479E-02 |
| P106  | -8.3105212E-03 | -1.0242942E-02 | 8.9267598E-03  | 7.0563793E-03  |
| P107  | 1.2178792E-02  | 1.2204161E-02  | 4.0105946E-03  | -2.5276681E-03 |
| P108  | 3.2640174E-02  | 3.4009641E-02  | -2.5677606E-03 | -9.8742772E-03 |
| P109  | -1.5241538E-02 | -1.7430105E-02 | 1.7213455E-03  | 4.4116795E-03  |
| P110  | 7.2904133E-03  | 7.4803314E-03  | -1.3019530E-04 | -1.5323428E-05 |
| P111  | 3.0123754E-02  | 3.2294201E-02  | -1.6704672E-03 | -4.5063652E-03 |
| P112  | -2.4698652E-02 | -2.7919387E-02 | 1.7321375E-03  | 3.6998460E-03  |
| P113  | -2.0108467E-02 | -2.2768997E-02 | 1.2022854E-03  | 3.4245245E-03  |
| P114  | 3.2464230E-03  | 3.2315469E-03  | -5.7961372E-04 | 1.2084100E-03  |
| P115  | 2.7026430E-02  | 2.9165615E-02  | -1.0763531E-03 | -3.5639251E-03 |
| P116  | -1.6378719E-02 | -1.8517258E-02 | 5.5150276E-04  | 2.0454893E-03  |
| P117  | 2.0337364E-02  | 2.2075907E-02  | -4.7877049E-04 | -2.1989836E-03 |
| P118  | -1.2478154E-02 | -1.4076487E-02 | 4.0427655E-04  | 1.0882326E-03  |
| P119  | -1.0926469E-02 | -1.2338287E-02 | 2.7518722E-04  | 1.0751326E-03  |
| P120  | 8.2088754E-04  | 6.7991983E-04  | 3.6907439E-05  | -3.3895965E-05 |
| P121  | -2.8669956E-04 | -3.1758657E-04 | 5.1420704E-06  | 2.7986340E-05  |
| P122  | 1.2432219E-02  | 1.3542176E-02  | -1.7134711E-04 | -1.1673421E-03 |
| P123  | -4.6956317E-03 | -5.3011443E-03 | 8.4416726E-05  | 4.1863657E-04  |
| P124  | 5.4364998E-03  | 5.9327446E-03  | -4.6979647E-05 | -4.6971952E-04 |
| P125  | 1.0610801E-03  | 1.1975676E-03  | -2.4914749E-05 | -9.3926858E-05 |
| P126  | -1.1375581E-03 | -1.2398142E-03 | 1.3893922E-05  | 1.0421095E-04  |

| (GRN) | Q23            | Q24            | Q26            | Q28            |
|-------|----------------|----------------|----------------|----------------|
| P100  | 1.9850330E-02  | 3.1516199E-02  | 4.1270741E-02  | 1.4542958E-02  |
| P101  | -2.2510833E-03 | 5.7875220E-03  | 2.3119449E-02  | -5.5253257E-03 |
| P102  | -2.2701416E-02 | -1.8019096E-02 | 6.3241453E-03  | -2.4094395E-02 |
| P103  | 2.0423624E-02  | 1.9592022E-02  | 2.9459081E-02  | 1.8194884E-02  |
| P104  | 2.8972236E-03  | -2.1718267E-05 | 1.3411888E-02  | -7.8393623E-04 |
| P105  | -1.4371824E-02 | -1.8478662E-02 | -1.7211124E-03 | -1.9084670E-02 |
| P106  | 2.2189797E-02  | 1.6413649E-02  | 2.5458981E-02  | 3.1172972E-02  |
| P107  | 4.1016394E-03  | -7.9821938E-04 | 5.5836406E-03  | 5.4626867E-03  |
| P108  | -1.1545677E-02 | -2.0215154E-02 | -1.3236070E-02 | -1.9843304E-02 |
| P109  | 4.3689162E-03  | 8.9692715E-03  | 2.0920188E-02  | 4.4401765E-02  |
| P110  | 1.7373168E-03  | -2.2904643E-03 | 3.6866531E-03  | 1.1342259E-02  |
| P111  | -6.1534433E-03 | -7.8336391E-03 | -1.9111438E-02 | -2.1261697E-02 |
| P112  | 2.8700477E-03  | 5.6483713E-03  | 1.4139181E-02  | 6.6298133E-02  |
| P113  | 1.7659518E-03  | 5.5437320E-03  | 1.2058918E-02  | 5.3851416E-02  |
| P114  | -2.3678512E-03 | 2.6009489E-03  | -1.8007484E-03 | 1.0536504E-02  |
| P115  | -3.2651887E-03 | -5.2911345E-03 | -1.0317921E-02 | -2.1824197E-02 |
| P116  | 1.4054851E-05  | 2.7042208E-03  | 5.9574465E-03  | 3.5063782E-02  |
| P117  | -1.1177608E-03 | -2.7578442E-03 | -5.1083583E-03 | -1.7401373E-02 |
| P118  | -1.1174905E-04 | 9.4911121E-04  | 3.0079200E-03  | 2.0586310E-03  |
| P119  | -3.1952310E-04 | 1.1089911E-03  | 2.7346462E-03  | 1.4435940E-02  |
| P120  | -2.8553493E-04 | -2.7571556E-05 | 2.8526941E-04  | 3.5859734E-03  |
| P121  | -2.2934646E-06 | 2.9876444E-05  | 6.0124742E-05  | 3.6004825E-04  |
| P122  | -1.9264959E-04 | -1.2375676E-03 | -2.1497838E-03 | -1.0995980E-02 |
| P123  | -2.4757521E-04 | 3.6973641E-04  | 9.1788224E-04  | 6.3571717E-03  |
| P124  | 2.8779381E-05  | -4.3790545E-04 | -7.1595140E-04 | -4.8910373E-03 |
| P125  | 3.8205452E-05  | -8.2733710E-05 | -2.2622669E-04 | -9.6143121E-04 |
| P126  | 1.0411320E-05  | 1.0664474E-04  | 1.8239679E-04  | 1.0114146E-03  |

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| (AMN) | P100           | P101           | P102           | P103           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 1.4505121E-03  | 1.3991529E-03  | 1.3516306E-03  | 1.1510993E-03  |
| P101  | 1.3991529E-03  | 1.4131544E-03  | 1.4261099E-03  | 1.1370737E-03  |
| P102  | 1.3516307E-03  | 1.4261099E-03  | 1.4950253E-03  | 1.1240960E-03  |
| P103  | 1.1510994E-03  | 1.1370737E-03  | 1.1240960E-03  | 9.6731827E-04  |
| P104  | 1.1384578E-03  | 1.1541314E-03  | 1.1686341E-03  | 9.5665587E-04  |
| P105  | 1.1294186E-03  | 1.1736403E-03  | 1.2145586E-03  | 9.4880528E-04  |
| P106  | 9.0235503E-04  | 8.8992344E-04  | 8.7842054E-04  | 7.7133969E-04  |
| P107  | 9.0402011E-04  | 9.1626024E-04  | 9.2758591E-04  | 7.6975809E-04  |
| P108  | 9.0923979E-04  | 9.4570996E-04  | 9.7945569E-04  | 7.7107379E-04  |
| P109  | 6.8108686E-04  | 6.6293859E-04  | 6.4614606E-04  | 5.8893716E-04  |
| P110  | 6.9127819E-04  | 6.9876913E-04  | 7.0570045E-04  | 5.9424627E-04  |
| P111  | 7.0523758E-04  | 7.3847960E-04  | 7.6923833E-04  | 6.0234903E-04  |
| P112  | 4.7671145E-04  | 4.4825047E-04  | 4.2191567E-04  | 4.1861726E-04  |
| P113  | 4.8510498E-04  | 4.6183677E-04  | 4.4030677E-04  | 4.2453244E-04  |
| P114  | 5.0963365E-04  | 5.1262884E-04  | 5.1540027E-04  | 4.4076366E-04  |
| P115  | 5.1912397E-04  | 5.4903772E-04  | 5.7671682E-04  | 4.4607108E-04  |
| P116  | 3.0496706E-04  | 2.8622871E-04  | 2.6889021E-04  | 2.6939792E-04  |
| P117  | 3.3216912E-04  | 3.5464567E-04  | 3.7544313E-04  | 2.8732259E-04  |
| P118  | 1.4847273E-04  | 1.3431962E-04  | 1.2122381E-04  | 1.3330324E-04  |
| P119  | 1.6057665E-04  | 1.4815570E-04  | 1.3666265E-04  | 1.4314034E-04  |
| P120  | 1.7264326E-04  | 1.7337206E-04  | 1.7404641E-04  | 1.5179905E-04  |
| P121  | -2.2200363E-07 | -5.4296212E-07 | -8.3994348E-07 | -1.5136202E-07 |
| P122  | 1.8163441E-04  | 1.9536203E-04  | 2.0806413E-04  | 1.5792921E-04  |
| P123  | 6.4686024E-05  | 5.9361068E-05  | 5.4433907E-05  | 5.7883418E-05  |
| P124  | 7.4492713E-05  | 8.0492853E-05  | 8.6044753E-05  | 6.4981154E-05  |
| P125  | -1.3877857E-05 | -1.2674454E-05 | -1.1560951E-05 | -1.2432075E-05 |
| P126  | -1.6304644E-05 | -1.7560553E-05 | -1.8722638E-05 | -1.4190159E-05 |

| (AMN) | P104           | P105           | P106           | P107           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 1.1384578E-03  | 1.1294185E-03  | 9.0235510E-04  | 9.0402013E-04  |
| P101  | 1.1541314E-03  | 1.1736403E-03  | 8.8992344E-04  | 9.1626024E-04  |
| P102  | 1.1686341E-03  | 1.2145586E-03  | 8.7842054E-04  | 9.2758591E-04  |
| P103  | 9.5665587E-04  | 9.4880528E-04  | 7.7133969E-04  | 7.6975809E-04  |
| P104  | 9.7946372E-04  | 9.8703797E-04  | 7.5870538E-04  | 7.8025528E-04  |
| P105  | 9.8703797E-04  | 1.0262915E-03  | 7.4861860E-04  | 7.9244977E-04  |
| P106  | 7.5870538E-04  | 7.4861860E-04  | 6.4470581E-04  | 6.2882944E-04  |
| P107  | 7.8025528E-04  | 7.9244977E-04  | 6.2882944E-04  | 6.5421443E-04  |
| P108  | 8.0426645E-04  | 8.3838474E-04  | 6.1528031E-04  | 6.6062728E-04  |
| P109  | 5.7094994E-04  | 5.5523260E-04  | 5.0490941E-04  | 4.8097505E-04  |
| P110  | 6.0045753E-04  | 6.0810754E-04  | 4.9334694E-04  | 5.0225753E-04  |
| P111  | 6.3285210E-04  | 6.6396503E-04  | 4.8340542E-04  | 5.2519177E-04  |
| P112  | 3.9114250E-04  | 3.6577246E-04  | 3.7357556E-04  | 3.3664767E-04  |
| P113  | 4.0195240E-04  | 3.8133280E-04  | 3.7462116E-04  | 3.4430678E-04  |
| P114  | 4.4298669E-04  | 4.4637927E-04  | 3.7022305E-04  | 3.7359254E-04  |
| P115  | 4.7364533E-04  | 5.0150012E-04  | 3.5863411E-04  | 3.9632125E-04  |
| P116  | 2.5130821E-04  | 2.3458871E-04  | 2.4249552E-04  | 2.1812089E-04  |
| P117  | 3.0812248E-04  | 3.2900053E-04  | 2.3167067E-04  | 2.6009224E-04  |
| P118  | 1.1973766E-04  | 1.0700339E-04  | 1.2472070E-04  | 1.0638405E-04  |
| P119  | 1.3119730E-04  | 1.2006007E-04  | 1.3147764E-04  | 1.1534985E-04  |
| P120  | 1.5226377E-04  | 1.5313246E-04  | 1.3050754E-04  | 1.3123717E-04  |
| P121  | -4.5429187E-07 | -7.4722426E-07 | 7.1161546E-08  | -3.4037396E-07 |
| P122  | 1.7066260E-04  | 1.8339505E-04  | 1.2762550E-04  | 1.4502232E-04  |
| P123  | 5.2767662E-05  | 4.7987403E-05  | 5.3561181E-05  | 4.6647636E-05  |
| P124  | 7.0553595E-05  | 7.6114411E-05  | 5.2585689E-05  | 6.0198404E-05  |
| P125  | -1.1276948E-05 | -1.0195732E-05 | -1.1546649E-05 | -9.9854753E-06 |
| P126  | -1.5355545E-05 | -1.6520130E-05 | -1.1472003E-05 | -1.3064161E-05 |



| (AMN) | P108           | P109           | P110           | P111           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 9.0923973E-04  | 6.8108686E-04  | 6.9127817E-04  | 7.0523755E-04  |
| P101  | 9.4570996E-04  | 6.6293859E-04  | 6.9876913E-04  | 7.3847960E-04  |
| P102  | 9.7945569E-04  | 6.4614606E-04  | 7.0570045E-04  | 7.6923833E-04  |
| P103  | 7.7107379E-04  | 5.8893716E-04  | 5.9424627E-04  | 6.0234903E-04  |
| P104  | 8.0426645E-04  | 5.7094994E-04  | 6.0045753E-04  | 6.3285210E-04  |
| P105  | 8.3838474E-04  | 5.5523260E-04  | 6.0810754E-04  | 6.6396503E-04  |
| P106  | 6.1528031E-04  | 5.0490941E-04  | 4.9334694E-04  | 4.8340542E-04  |
| P107  | 6.6062728E-04  | 4.8097505E-04  | 5.0225753E-04  | 5.2519177E-04  |
| P108  | 7.0728381E-04  | 4.5914434E-04  | 5.1261424E-04  | 5.6801466E-04  |
| P109  | 4.5914434E-04  | 4.2038931E-04  | 3.9167547E-04  | 3.6324652E-04  |
| P110  | 5.1261424E-04  | 3.9167547E-04  | 4.1225038E-04  | 4.1746024E-04  |
| P111  | 5.6801466E-04  | 3.6324652E-04  | 4.1746024E-04  | 4.7248830E-04  |
| P112  | 3.0150093E-04  | 3.2896743E-04  | 2.8269849E-04  | 2.3677977E-04  |
| P113  | 3.1572436E-04  | 3.2508401E-04  | 2.8735478E-04  | 2.4983899E-04  |
| P114  | 3.7824541E-04  | 2.9945236E-04  | 3.0502923E-04  | 3.1056203E-04  |
| P115  | 4.3467746E-04  | 2.6985638E-04  | 3.1875305E-04  | 3.6834034E-04  |
| P116  | 1.9493346E-04  | 2.1627121E-04  | 1.8550401E-04  | 1.5486928E-04  |
| P117  | 2.8888740E-04  | 1.7477201E-04  | 2.1178641E-04  | 2.4927556E-04  |
| P118  | 8.8729613E-05  | 1.1674168E-04  | 9.3324165E-05  | 7.0035526E-05  |
| P119  | 9.9903630E-05  | 1.2036938E-04  | 9.9843261E-05  | 7.9405093E-05  |
| P120  | 1.3240101E-04  | 1.0907064E-04  | 1.1028982E-04  | 1.1168305E-04  |
| P121  | -7.4565185E-07 | 3.1106408E-07  | -2.1950800E-07 | -7.5254209E-07 |
| P122  | 1.6259992E-04  | 9.6472541E-05  | 1.1917990E-04  | 1.4216101E-04  |
| P123  | 4.0016779E-05  | 4.9504207E-05  | 4.0679454E-05  | 3.1888192E-05  |
| P124  | 6.7879207E-05  | 3.9798791E-05  | 4.9747061E-05  | 5.9811245E-05  |
| P125  | -8.4859962E-06 | -1.0717857E-05 | -8.7247885E-06 | -6.7405744E-06 |
| P126  | -1.4672160E-05 | -8.6748599E-06 | -1.0753786E-05 | -1.2857518E-05 |

| (AMN) | P112           | P113           | P114           | P115           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 4.7671147E-04  | 4.8510503E-04  | 5.0963364E-04  | 5.1912392E-04  |
| P101  | 4.4825047E-04  | 4.6183677E-04  | 5.1262884E-04  | 5.4903772E-04  |
| P102  | 4.2191567E-04  | 4.4030677E-04  | 5.1540027E-04  | 5.7671682E-04  |
| P103  | 4.1861726E-04  | 4.2453244E-04  | 4.4076366E-04  | 4.4607108E-04  |
| P104  | 3.9114250E-04  | 4.0195240E-04  | 4.4298669E-04  | 4.7364533E-04  |
| P105  | 3.6577246E-04  | 3.8133280E-04  | 4.4637927E-04  | 5.0150012E-04  |
| P106  | 3.7359556E-04  | 3.7462116E-04  | 3.7022305E-04  | 3.5863411E-04  |
| P107  | 3.3664767E-04  | 3.4430678E-04  | 3.7359254E-04  | 3.9632125E-04  |
| P108  | 3.0150093E-04  | 3.1572436E-04  | 3.7824541E-04  | 4.3467746E-04  |
| P109  | 3.2896743E-04  | 3.2508401E-04  | 2.9945236E-04  | 2.6985638E-04  |
| P110  | 2.8269849E-04  | 2.8735478E-04  | 3.0502923E-04  | 3.1875305E-04  |
| P111  | 2.3677977E-04  | 2.4983899E-04  | 3.1056203E-04  | 3.6834034E-04  |
| P112  | 2.9058548E-04  | 2.7940517E-04  | 2.2590203E-04  | 1.7419814E-04  |
| P113  | 2.7940517E-04  | 2.7173627E-04  | 2.2965128E-04  | 1.8586030E-04  |
| P114  | 2.2590203E-04  | 2.2965128E-04  | 2.4762422E-04  | 2.4339795E-04  |
| P115  | 1.7419814E-04  | 1.8586030E-04  | 2.4339795E-04  | 2.9965160E-04  |
| P116  | 1.9442832E-04  | 1.8805842E-04  | 1.5266910E-04  | 1.1585490E-04  |
| P117  | 1.1192827E-04  | 1.2054774E-04  | 1.6456379E-04  | 2.0827886E-04  |
| P118  | 1.1319261E-04  | 1.0748105E-04  | 7.9326552E-05  | 5.1888472E-05  |
| P119  | 1.1275559E-04  | 1.0823195E-04  | 8.4048862E-05  | 5.9429999E-05  |
| P120  | 8.7340555E-05  | 8.7787633E-05  | 8.9508055E-05  | 9.0878438E-05  |
| P121  | 6.4040428E-07  | 5.2275633E-07  | -1.0563789E-07 | -7.4414946E-07 |
| P122  | 6.1404182E-05  | 6.6616001E-05  | 9.3786391E-05  | 1.2101650E-04  |
| P123  | 4.7010454E-05  | 4.5086484E-05  | 3.4646220E-05  | 2.3952915E-05  |
| P124  | 2.5234951E-05  | 2.7500844E-05  | 3.9442895E-05  | 5.1467200E-05  |
| P125  | -1.0250990E-05 | -9.7970166E-06 | -7.4247859E-06 | -5.0399767E-06 |
| P126  | -5.5153189E-06 | -5.9913624E-06 | -8.4813496E-06 | -1.0980385E-05 |

| (AMN) | P116           | P117           | P118           | P119           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 3.0496707E-04  | 3.3216911E-04  | 1.4847274E-04  | 1.6057665E-04  |
| P101  | 2.8622871E-04  | 3.5464567E-04  | 1.3431962E-04  | 1.4815570E-04  |
| P102  | 2.6889021E-04  | 3.7544313E-04  | 1.2122381E-04  | 1.3666265E-04  |
| P103  | 2.6939792E-04  | 2.8732259E-04  | 1.3330324E-04  | 1.4314034E-04  |
| P104  | 2.5130821E-04  | 3.0812248E-04  | 1.1973766E-04  | 1.3119730E-04  |
| P105  | 2.3458871E-04  | 3.2900053E-04  | 1.0700339E-04  | 1.2006007E-04  |
| P106  | 2.4249552E-04  | 2.3167067E-04  | 1.2472070E-04  | 1.3147764E-04  |
| P107  | 2.1812089E-04  | 2.6009224E-04  | 1.0638405E-04  | 1.1534985E-04  |
| P108  | 1.9493346E-04  | 2.8888740E-04  | 8.8729613E-05  | 9.9903630E-05  |
| P109  | 2.1627121E-04  | 1.7477201E-04  | 1.1674168E-04  | 1.2036938E-04  |
| P110  | 1.8550401E-04  | 2.1178641E-04  | 9.3324165E-05  | 9.9843261E-05  |
| P111  | 1.5486928E-04  | 2.4927556E-04  | 7.0035526E-05  | 7.9405093E-05  |
| P112  | 1.9442832E-04  | 1.1192827E-04  | 1.1319261E-04  | 1.1275559E-04  |
| P113  | 1.8805842E-04  | 1.2054774E-04  | 1.0748105E-04  | 1.0823195E-04  |
| P114  | 1.5266910E-04  | 1.6456379E-04  | 7.9326552E-05  | 8.4048862E-05  |
| P115  | 1.1585490E-04  | 2.0827886E-04  | 5.1888472E-05  | 5.9429999E-05  |
| P116  | 1.4282225E-04  | 7.5520196E-05  | 8.5903801E-05  | 8.5943445E-05  |
| P117  | 7.5520196E-05  | 1.5657770E-04  | 3.3569683E-05  | 3.8767593E-05  |
| P118  | 8.5903801E-05  | 3.3569683E-05  | 6.6914914E-05  | 6.0224389E-05  |
| P119  | 8.5943445E-05  | 3.8767593E-05  | 6.0224389E-05  | 5.9291027E-05  |
| P120  | 6.4199367E-05  | 6.6988328E-05  | 3.8707600E-05  | 4.0511682E-05  |
| P121  | 5.5075644E-07  | -6.7859933E-07 | 4.9858472E-07  | 4.6898909E-07  |
| P122  | 4.1893731E-05  | 9.4471601E-05  | 1.8514919E-05  | 2.1517623E-05  |
| P123  | 3.6680309E-05  | 1.5674333E-05  | 2.6903783E-05  | 2.6575544E-05  |
| P124  | 1.7335723E-05  | 4.1024976E-05  | 7.6342590E-06  | 8.9070541E-06  |
| P125  | -7.9190419E-06 | -3.2856149E-06 | -5.9305301E-06 | -5.6699885E-06 |
| P126  | -3.7704818E-06 | -8.6259286E-06 | -1.6646227E-06 | -1.9368020E-06 |

| (AMN) | P120           | P121           | P122           | P123           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 1.7264326E-04  | -2.2200375E-07 | 1.8163441E-04  | 6.4686036E-05  |
| P101  | 1.7337206E-04  | -5.4296212E-07 | 1.9536203E-04  | 5.9361068E-05  |
| P102  | 1.7404641E-04  | -8.3994348E-07 | 2.0806413E-04  | 5.4433907E-05  |
| P103  | 1.5179905E-04  | -1.5136202E-07 | 1.5792921E-04  | 5.7883418E-05  |
| P104  | 1.5226377E-04  | -4.5429187E-07 | 1.7066260E-04  | 5.2767662E-05  |
| P105  | 1.5313246E-04  | -7.4722426E-07 | 1.8339505E-04  | 4.7987403E-05  |
| P106  | 1.3050754E-04  | 7.1161546E-08  | 1.2762550E-04  | 5.3561181E-05  |
| P107  | 1.3123717E-04  | -3.4037396E-07 | 1.4502232E-04  | 4.6647636E-05  |
| P108  | 1.3240101E-04  | -7.4565185E-07 | 1.6259992E-04  | 4.0016779E-05  |
| P109  | 1.0907064E-04  | 3.1106408E-07  | 9.6472541E-05  | 4.9504207E-05  |
| P110  | 1.1028982E-04  | -2.1950800E-07 | 1.1917990E-04  | 4.0679454E-05  |
| P111  | 1.1168305E-04  | -7.5254209E-07 | 1.4216101E-04  | 3.1888192E-05  |
| P112  | 8.7340555E-05  | 6.4040428E-07  | 6.1404182E-05  | 4.7010454E-05  |
| P113  | 8.7787633E-05  | 5.2275633E-07  | 6.6616001E-05  | 4.5086484E-05  |
| P114  | 8.9508055E-05  | -1.0563789E-07 | 9.3786391E-05  | 3.4646220E-05  |
| P115  | 9.0878438E-05  | -7.4414946E-07 | 1.2101650E-04  | 2.3952915E-05  |
| P116  | 6.4199307E-05  | 5.5075644E-07  | 4.1893731E-05  | 3.6680309E-05  |
| P117  | 6.6988328E-05  | -6.7859933E-07 | 9.4471601E-05  | 1.5674333E-05  |
| P118  | 3.8707600E-05  | 4.7858472E-07  | 1.8514919E-05  | 2.6903783E-05  |
| P119  | 4.0511682E-05  | 4.6898909E-07  | 2.1517623E-05  | 2.6575544E-05  |
| P120  | 4.2066535E-05  | -2.6920734E-08 | 4.3156825E-05  | 1.7714461E-05  |
| P121  | -2.6920734E-08 | 1.2350560E-08  | -5.2711842E-07 | 2.2206740E-07  |
| P122  | 4.3156825E-05  | -5.2711842E-07 | 6.4505124E-05  | 8.7207309E-06  |
| P123  | 1.7714461E-05  | 2.2206740E-07  | 8.7207309E-06  | 1.5036133E-05  |
| P124  | 1.9111009E-05  | -2.4954957E-07 | 2.9217768E-05  | 3.6151630E-06  |
| P125  | -3.7344927E-06 | -4.7202953E-08 | -1.8227732E-06 | -3.0099690E-06 |
| P126  | -3.9641384E-06 | 4.9447767E-08  | -5.9667732E-06 | -7.8529065E-07 |

| (AMN) | P124           | P125           | P126           |
|-------|----------------|----------------|----------------|
| P100  | 7.4492714E-05  | -1.3877858E-05 | -1.6304644E-05 |
| P101  | 8.0492853E-05  | -1.2674454E-05 | -1.7560553E-05 |
| P102  | 8.6044753E-05  | -1.1560951E-05 | -1.8722638E-05 |
| P103  | 6.4981154E-05  | -1.2432075E-05 | -1.4190159E-05 |
| P104  | 7.0553575E-05  | -1.1276948E-05 | -1.5355545E-05 |
| P105  | 7.6114411E-05  | -1.0195732E-05 | -1.6520130E-05 |
| P106  | 5.2585689E-05  | -1.1546649E-05 | -1.1472003E-05 |
| P107  | 6.0198404E-05  | -9.9854753E-06 | -1.3064161E-05 |
| P108  | 6.7879207E-05  | -8.4859962E-06 | -1.4672160E-05 |
| P109  | 3.9798791E-05  | -1.0717857E-05 | -8.6748599E-06 |
| P110  | 4.9747061E-05  | -8.7247885E-06 | -1.0753786E-05 |
| P111  | 5.9811245E-05  | -6.7405744E-06 | -1.2857518E-05 |
| P112  | 2.5234951E-05  | -1.0250990E-05 | -5.5153189E-06 |
| P113  | 2.7500844E-05  | -9.7970166E-06 | -5.9913624E-06 |
| P114  | 3.9442875E-05  | -7.4247859E-06 | -8.4813496E-06 |
| P115  | 5.1467200E-05  | -5.0399767E-06 | -1.0980385E-05 |
| P116  | 1.7335723E-05  | -7.9190419E-06 | -3.7704818E-06 |
| P117  | 4.1024976E-05  | -3.2856149E-06 | -8.6259286E-06 |
| P118  | 7.6342590E-06  | -5.9305301E-06 | -1.6646227E-06 |
| P119  | 8.9070541E-06  | -5.6699885E-06 | -1.9368020E-06 |
| P120  | 1.9111009E-05  | -3.7344927E-06 | -3.9641384E-06 |
| P121  | -2.4954957E-07 | -4.7202953E-08 | 4.9447767E-08  |
| P122  | 2.9217768E-05  | -1.8227732E-06 | -5.9667732E-06 |
| P123  | 3.6151630E-06  | -3.0099690E-06 | -7.8529065E-07 |
| P124  | 1.6669480E-05  | -7.5429981E-07 | -3.1478715E-06 |
| P125  | -7.5429981E-07 | 3.1226028E-06  | 1.6405364E-07  |
| P126  | -3.1478715E-06 | 1.6405364E-07  | 3.3592148E-06  |

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REDUNDANT STRESS ANALYSIS

E = 10400000.0

5-B ANTI-SYMMETRIC

# TRIPLE PRODUCT

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| TRIPLE | Q19            | Q20            | Q21            | Q22            |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 8.2360766E-02  | -3.9262543E-02 | 7.0104684E-03  | -9.4535632E-02 |
| Q20    | -3.9262543E-02 | 3.2909120E-02  | -1.2341017E-02 | 4.3577823E-02  |
| Q21    | 7.0104684E-03  | -1.2341017E-02 | 3.7093000E-02  | 1.3598895E-02  |
| Q22    | -9.4535632E-02 | 4.3577823E-02  | 1.3598895E-02  | 1.5105786E-01  |
| Q23    | 8.1339178E-03  | -1.0649734E-02 | 1.7280166E-02  | -1.3968343E-03 |
| Q24    | -8.5264751E-02 | 3.7546512E-02  | 8.0777276E-03  | 1.2657417E-01  |
| Q26    | -7.9681355E-02 | 3.5076267E-02  | 4.4849684E-03  | 1.1581727E-01  |
| Q28    | -1.2077752E-02 | 2.6880600E-03  | 2.6610397E-03  | 1.6832834E-02  |
| P100   | 4.2532650E-03  | -1.4669071E-03 | -3.7184997E-03 | -9.8308020E-03 |
| P101   | -2.0849573E-03 | 1.0024462E-03  | -9.1016653E-04 | 1.5846866E-03  |
| P102   | -7.9496828E-03 | 3.2873266E-03  | 1.6883704E-03  | 1.2147381E-02  |
| P103   | 4.5140403E-03  | -1.5010248E-03 | -2.4267243E-03 | -8.2268679E-03 |
| P104   | -1.1472316E-03 | 4.6738618E-04  | -5.0458446E-04 | 9.9019368E-04  |
| P105   | -6.6025565E-03 | 2.3555999E-03  | 1.3206923E-03  | 9.9219298E-03  |
| P106   | 4.1695104E-03  | -1.4640363E-03 | -1.1562709E-03 | -6.5871152E-03 |
| P107   | -5.9805898E-04 | 1.4754493E-04  | -1.1968058E-04 | 6.0615681E-04  |
| P108   | -5.2870479E-03 | 1.7363516E-03  | 9.1036308E-04  | 7.6671457E-03  |
| P109   | 3.5421146E-03  | -1.2541665E-03 | -5.3643131E-04 | -5.1776394E-03 |
| P110   | -2.9157900E-04 | 3.1425551E-05  | 1.9347618E-05  | 3.1888692E-04  |
| P111   | -4.0696823E-03 | 1.2619484E-03  | 6.2958874E-04  | 5.7592438E-03  |
| P112   | 3.2411205E-03  | -9.4873445E-04 | -5.5717877E-04 | -4.6002745E-03 |
| P113   | 2.7636344E-03  | -8.4252598E-04 | -4.4562480E-04 | -3.9290231E-03 |
| P114   | 1.0867097E-05  | -8.2339865E-05 | 5.1232381E-05  | -5.1416860E-05 |
| P115   | -2.9197263E-03 | 8.2734671E-04  | 4.6247177E-04  | 4.0642399E-03  |
| P116   | 1.6032103E-03  | -4.4223285E-04 | -2.5286965E-04 | -2.2275579E-03 |
| P117   | -1.8187101E-03 | 4.7058672E-04  | 2.8279749E-04  | 2.4818720E-03  |
| P118   | 6.4006181E-04  | -1.5143868E-04 | -9.7909386E-05 | -8.6141059E-04 |
| P119   | 7.4424542E-04  | -1.8555719E-04 | -1.1499437E-04 | -1.0121465E-03 |
| P120   | -8.2407582E-05 | 1.4271142E-05  | 1.1928252E-05  | 1.0234795E-04  |
| P121   | 2.1646396E-05  | -5.2942459E-06 | -3.3310541E-06 | -2.9254571E-05 |
| P122   | -9.5908884E-04 | 2.2868840E-04  | 1.4683625E-04  | 1.2871607E-03  |
| P123   | 2.5672922E-04  | -5.9293147E-05 | -3.9095815E-05 | -3.4390200E-04 |
| P124   | -3.7472068E-04 | 8.4186473E-05  | 5.6760933E-05  | 4.9716136E-04  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |

| TRIPLE | Q23            | Q24            | Q26            | Q28            |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 8.1339178E-03  | -8.5264751E-02 | -7.9681355E-02 | -1.2077752E-02 |
| Q20    | -1.0649734E-02 | 3.7546512E-02  | 3.5076267E-02  | 2.6880600E-03  |
| Q21    | 1.7280166E-02  | 8.0777276E-03  | 4.4849684E-03  | 2.6610397E-03  |
| Q22    | -1.3968343E-03 | 1.2657417E-01  | 1.1581727E-01  | 1.6832834E-02  |
| Q23    | 2.3775491E-02  | -4.3280171E-04 | -5.0551726E-03 | 1.2713234E-03  |
| Q24    | -4.3280171E-04 | 1.2464860E-01  | 1.0680016E-01  | 1.5551611E-02  |
| Q26    | -5.0551726E-03 | 1.0680016E-01  | 1.1010561E-01  | 1.4943844E-02  |
| Q28    | 1.2713234E-03  | 1.5551611E-02  | 1.4943844E-02  | 1.2046278E-02  |
| P100   | -1.5414004E-03 | -8.6354787E-03 | -7.8105419E-03 | -1.2538818E-03 |
| P101   | -4.3051773E-04 | 1.3720815E-03  | 1.1477827E-03  | 2.9576544E-04  |
| P102   | 5.9737648E-04  | 1.0632027E-02  | 9.4368761E-03  | 1.7296463E-03  |
| P103   | -1.0734280E-03 | -7.3697158E-03 | -6.7366240E-03 | -1.1998077E-03 |
| P104   | -2.8523948E-04 | 8.9851302E-04  | 7.5332617E-04  | 1.7414951E-04  |
| P105   | 4.7479686E-04  | 8.8821735E-03  | 7.9853266E-03  | 1.5008878E-03  |
| P106   | -6.0545847E-04 | -6.1040876E-03 | -5.6628343E-03 | -1.1457648E-03 |
| P107   | -1.1222964E-04 | 5.5772457E-04  | 4.8650437E-04  | 7.3338992E-05  |
| P108   | 3.5219782E-04  | 7.1320468E-03  | 6.5335252E-03  | 1.2720807E-03  |
| P109   | -1.2245858E-04 | -4.8021201E-03 | -4.5886284E-03 | -1.0916448E-03 |
| P110   | -9.1714184E-06 | 3.1636016E-04  | 2.4531497E-04  | -2.4005930E-05 |
| P111   | 1.9396107E-04  | 5.3419595E-03  | 5.0812917E-03  | 1.0431914E-03  |
| P112   | -1.8343056E-04 | -4.2609448E-03 | -4.0626635E-03 | -1.2574991E-03 |
| P113   | -1.2726296E-04 | -3.6410863E-03 | -3.4658932E-03 | -1.0374908E-03 |
| P114   | 6.0854522E-05  | -5.0443283E-05 | -1.1560497E-05 | -6.4421834E-05 |
| P115   | 1.5297806E-04  | 3.7683680E-03  | 3.5612017E-03  | 8.1433804E-04  |
| P116   | -7.1014253E-05 | -2.0640281E-03 | -1.9640318E-03 | -6.2994397E-04 |
| P117   | 9.3187345E-05  | 2.3010253E-03  | 2.1728142E-03  | 5.4309466E-04  |
| P118   | -2.6833335E-05 | -7.9801559E-04 | -7.5897592E-04 | -1.2688575E-04 |
| P119   | -3.1773366E-05 | -9.3771924E-04 | -8.199231E-04  | -2.6619055E-04 |
| P120   | 7.0455593E-06  | 9.5201563E-05  | 8.6068881E-05  | -4.8650879E-06 |
| P121   | -1.0168221E-06 | -2.7113334E-05 | -2.5678370E-05 | -7.5766243E-06 |
| P122   | 4.8227078E-05  | 1.1932940E-03  | 1.1260450E-03  | 3.0198742E-04  |
| P123   | -1.0675282E-05 | -3.1858339E-04 | -3.0297546E-04 | -9.9442438E-05 |
| P124   | 1.8599985E-05  | 4.6088545E-04  | 4.3470709E-04  | 1.2212117E-04  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |



| TRIPLE | P100           | P101           | P102           | P103           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 4.2532650E-03  | -2.0849573E-03 | -7.9496828E-03 | 4.5140403E-03  |
| Q20    | -1.4669071E-03 | 1.0024462E-03  | 3.2873266E-03  | -1.5010248E-03 |
| Q21    | -3.7184997E-03 | -9.1016653E-04 | 1.6883704E-03  | -2.4267243E-03 |
| Q22    | -9.8308020E-03 | 1.5845866E-03  | 1.2147381E-02  | -8.2268679E-03 |
| Q23    | -1.5414004E-03 | -4.3051773E-04 | 5.9737648E-04  | -1.0734280E-03 |
| Q24    | -8.6354787E-03 | 1.3720815E-03  | 1.0632027E-02  | -7.3697158E-03 |
| Q26    | -7.8105419E-03 | 1.1477827E-03  | 9.4368761E-03  | -6.7366240E-03 |
| Q28    | -1.2538818E-03 | 2.9576544E-04  | 1.7296463E-03  | -1.1998077E-03 |
| P100   | 2.2432941E-03  | 1.2626624E-03  | 3.5528878E-04  | 1.7137206E-03  |
| P101   | 1.2626624E-03  | 1.3341508E-03  | 1.4002986E-03  | 9.6201782E-04  |
| P102   | 3.5528878E-04  | 1.4002986E-03  | 2.3672411E-03  | 2.6647091E-04  |
| P103   | 1.7137206E-03  | 9.6201782E-04  | 2.6647091E-04  | 1.3997399E-03  |
| P104   | 9.9718746E-04  | 1.0545508E-03  | 1.1076288E-03  | 8.0402734E-04  |
| P105   | 3.0828619E-04  | 1.1467855E-03  | 1.9226447E-03  | 2.3121829E-04  |
| P106   | 1.2737471E-03  | 7.0443708E-04  | 1.7765733E-04  | 1.0781251E-03  |
| P107   | 7.6191269E-04  | 8.1004611E-04  | 8.5458368E-04  | 6.3221719E-04  |
| P108   | 2.6128859E-04  | 9.1658944E-04  | 1.5229361E-03  | 1.9596960E-04  |
| P109   | 9.2310956E-04  | 4.8978340E-04  | 8.8828831E-05  | 8.0138563E-04  |
| P110   | 5.6814823E-04  | 5.9928544E-04  | 6.2809651E-04  | 4.8058324E-04  |
| F111   | 2.1427406E-04  | 7.0975231E-04  | 1.1682159E-03  | 1.6070816E-04  |
| P112   | 6.9122216E-04  | 2.8983673E-04  | -8.1563240E-05 | 6.1601676E-04  |
| P113   | 6.5349290E-04  | 3.1407028E-04  | 4.2113134E-09  | 5.7919688E-04  |
| P114   | 4.2009879E-04  | 4.2321473E-04  | 4.2609787E-04  | 3.5961728E-04  |
| P115   | 1.6726691E-04  | 5.2299626E-04  | 8.5215086E-04  | 1.2545224E-04  |
| P116   | 3.7679552E-04  | 1.8108886E-04  | 2.4525392E-09  | 3.3886307E-04  |
| P117   | 1.1155285E-04  | 3.3199365E-04  | 5.3596641E-04  | 8.3666023E-05  |
| P118   | 1.4918818E-04  | 7.1700189E-05  | 9.3220981E-10  | 1.3683385E-04  |
| P119   | 1.7394018E-04  | 8.3596058E-05  | 1.0823619E-09  | 1.5852326E-04  |
| P120   | 1.2209775E-04  | 1.3173989E-04  | 1.4066171E-04  | 1.0621423E-04  |
| P121   | 1.4833015E-06  | -1.1366557E-06 | -3.5608891E-06 | 1.4739752E-06  |
| P122   | 6.2028883E-05  | 1.7777954E-04  | 2.8488305E-04  | 4.6522458E-05  |
| P123   | 5.9767797E-05  | 2.8724549E-05  | 3.8427751E-10  | 5.4973407E-05  |
| P124   | 2.5083949E-05  | 7.0176302E-05  | 1.1190003E-04  | 1.8813276E-05  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |

| TRIPLE | P104           | P105           | P106           | P107           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | -1.1472316E-03 | -6.6025565E-03 | 4.1695104E-03  | -5.9805898E-04 |
| Q20    | 4.6738618E-04  | 2.3555999E-03  | -1.4640363E-03 | 1.4954493E-04  |
| Q21    | -5.0458446E-04 | 1.3206923E-03  | -1.1562709E-03 | -1.1968058E-04 |
| Q22    | 9.9019368E-04  | 9.9219298E-03  | -6.5871152E-03 | 6.0615681E-04  |
| Q23    | -2.8523948E-04 | 4.7479686E-04  | -6.0545847E-04 | -1.1222964E-04 |
| Q24    | 8.9851302E-04  | 8.8821735E-03  | -6.1040376E-03 | 5.5772457E-04  |
| Q26    | 7.5332617E-04  | 7.9853266E-03  | -5.6628343E-03 | 4.8650437E-04  |
| Q28    | 1.7414951E-04  | 1.5008878E-03  | -1.1457648E-03 | 7.3338992E-05  |
| P100   | 9.9718746E-04  | 3.0828619E-04  | 1.2737471E-03  | 7.6191269E-04  |
| P101   | 1.0545508E-03  | 1.1467855E-03  | 7.0443708E-04  | 8.1004611E-04  |
| P102   | 1.1076288E-03  | 1.9226447E-03  | 1.7765733E-04  | 8.5458368E-04  |
| P103   | 8.0402734E-04  | 2.3121829E-04  | 1.0781251E-03  | 6.3221719E-04  |
| P104   | 8.7856182E-04  | 9.3424742E-04  | 6.0712452E-04  | 6.8114746E-04  |
| P105   | 9.3424742E-04  | 1.6154510E-03  | 1.5415358E-04  | 7.3026131E-04  |
| P106   | 6.0712452E-04  | 1.5415358E-04  | 8.8252320E-04  | 5.0253289E-04  |
| P107   | 6.8114746E-04  | 7.3026131E-04  | 5.0253289E-04  | 5.6416055E-04  |
| P108   | 7.5620587E-04  | 1.2990819E-03  | 1.3065323E-04  | 6.0592422E-04  |
| P109   | 4.3222519E-04  | 7.7075450E-05  | 6.7967802E-04  | 3.6925817E-04  |
| P110   | 5.1071895E-04  | 5.4121975E-04  | 3.9302746E-04  | 4.2322445E-04  |
| P111   | 5.9004050E-04  | 1.0060981E-03  | 1.0714438E-04  | 4.7788085E-04  |
| P112   | 2.6617828E-04  | -7.0779167E-05 | 5.4082494E-04  | 2.3745522E-04  |
| P113   | 2.8408327E-04  | 2.7396567E-10  | 5.0491343E-04  | 2.4988180E-04  |
| P114   | 3.6425562E-04  | 3.6973951E-04  | 2.9914294E-04  | 3.0580120E-04  |
| P115   | 4.3725622E-04  | 7.3944353E-04  | 8.3639191E-05  | 3.5688860E-04  |
| P116   | 1.6620486E-04  | 1.7994086E-10  | 3.0093832E-04  | 1.4893447E-04  |
| P117   | 2.7928585E-04  | 4.6888603E-04  | 5.5780259E-05  | 2.2987238E-04  |
| P118   | 6.7113908E-05  | 3.6943730E-11  | 1.2448281E-04  | 6.1606572E-05  |
| P119   | 7.7752143E-05  | 3.9260760E-11  | 1.4311009E-04  | 7.0825211E-05  |
| P120   | 1.1503438E-04  | 1.2386619E-04  | 9.0332963E-05  | 9.8604841E-05  |
| P121   | -8.7036995E-07 | -3.1357307E-06 | 1.4646898E-06  | -6.3960498E-07 |
| P122   | 1.5028879E-04  | 2.5086796E-04  | 3.1016578E-05  | 1.2451262E-04  |
| P123   | 2.6963241E-05  | 2.4382945E-11  | 5.0180347E-05  | 2.4834268E-05  |
| P124   | 5.9516262E-05  | 9.8970613E-05  | 1.2542838E-05  | 4.9520102E-05  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |

| TRIPLE | P108           | P109           | P110           | P111           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | -5.2870429E-03 | 3.5421146E-03  | -2.9157900E-04 | -4.0696823E-03 |
| Q20    | 1.7363516E-03  | -1.2541665E-03 | 3.1425551E-05  | 1.2619484E-03  |
| Q21    | 9.1036308E-04  | -5.3643131E-04 | 1.9347618E-05  | 6.2958874E-04  |
| Q22    | 7.6671457E-03  | -5.1776394E-03 | 3.1888692E-04  | 5.7592438E-03  |
| Q23    | 3.5219732E-04  | -1.2245658E-04 | -9.1714184E-06 | 1.9396107E-04  |
| Q24    | 7.1320468E-03  | -4.8021201E-03 | 3.1636016E-04  | 5.3419595E-03  |
| Q26    | 6.5335252E-03  | -4.5886284E-03 | 2.4531497E-04  | 5.0812917E-03  |
| Q28    | 1.2720807E-03  | -1.0916448E-03 | -2.4005930E-05 | 1.0431914E-03  |
| P100   | 2.6128859E-04  | 9.2310956E-04  | 5.6814823E-04  | 2.1427406E-04  |
| P101   | 9.1658944E-04  | 4.8978340E-04  | 5.9928544E-04  | 7.0975231E-04  |
| P102   | 1.5229361E-03  | 8.8828831E-05  | 6.2809651E-04  | 1.1682159E-03  |
| P103   | 1.9596960E-04  | 8.0138567E-04  | 4.8058324E-04  | 1.6070816E-04  |
| P104   | 7.5620587E-04  | 4.3222519E-04  | 5.1071895E-04  | 5.9004050E-04  |
| P105   | 1.2990819E-03  | 7.7075450E-05  | 5.4121975E-04  | 1.0060981E-03  |
| P106   | 1.3065323E-04  | 6.7967802E-04  | 3.9302746E-04  | 1.0714438E-04  |
| P107   | 6.0592422E-04  | 3.6925817E-04  | 4.2322445E-04  | 4.7788085E-04  |
| P108   | 1.0751953E-03  | 6.5325491E-05  | 4.5433183E-04  | 8.4395460E-04  |
| P109   | 6.5325491E-05  | 5.5792072E-04  | 3.0544219E-04  | 5.3571274E-05  |
| P110   | 4.5433183E-04  | 3.0544219E-04  | 3.4435203E-04  | 3.641432E-04   |
| P111   | 8.4395460E-04  | 5.3571274E-05  | 3.6741432E-04  | 6.8175613E-04  |
| P112   | -5.9989021E-05 | 4.6559454E-04  | 2.0797680E-04  | -4.9195012E-05 |
| P113   | 2.5179760E-10  | 4.3059379E-04  | 2.1507598E-04  | 2.0762963E-10  |
| P114   | 3.1337356E-04  | 2.3864643E-04  | 2.4761074E-04  | 2.5698730E-04  |
| P115   | 6.2671701E-04  | 4.1818867E-05  | 2.7769566E-04  | 5.1394992E-04  |
| P116   | 1.6653742E-10  | 2.6299227E-04  | 1.3136122E-04  | 1.4021851E-10  |
| P117   | 4.0179329E-04  | 2.7889640E-05  | 1.8115894E-04  | 3.3467471E-04  |
| P118   | 3.7132328E-11  | 1.1212312E-04  | 5.6004027E-05  | 3.2091741E-11  |
| P119   | 3.9828086E-11  | 1.2768690E-04  | 6.3777931E-05  | 3.4320696E-11  |
| P120   | 1.0706792E-04  | 7.4445108E-05  | 8.2286360E-05  | 9.0262790E-05  |
| P121   | -2.7104751E-06 | 1.4553085E-06  | -4.1487206E-07 | -2.2850461E-06 |
| P122   | 2.1684617E-04  | 1.5508019E-05  | 9.9091804E-05  | 1.8281050E-04  |
| P123   | 2.3280595E-11  | 4.5383805E-05  | 2.2668619E-05  | 2.0068223E-11  |
| P124   | 8.6038533E-05  | 6.2713082E-06  | 3.9659127E-05  | 7.3100964E-05  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |

| TRIPLE | P112           | P113           | P114           | P115           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 3.2411205E-03  | 2.7636344E-03  | 1.0867097E-05  | -2.9197263E-03 |
| Q20    | -9.4873445E-04 | -8.4252598E-04 | -8.2339865E-05 | 8.2734671E-04  |
| Q21    | -5.5717877E-04 | -4.4562480E-04 | 5.1232381E-05  | 4.6247177E-04  |
| Q22    | -4.6002745E-03 | -3.9290231E-03 | -5.1416860E-05 | 4.0642399E-03  |
| Q23    | -1.8343056E-04 | -1.2726296E-04 | 6.0854522E-05  | 1.5297806E-04  |
| Q24    | -4.2609448E-03 | -3.6410863E-03 | -5.0443283E-05 | 3.7683680E-03  |
| Q26    | -4.0626635E-03 | -3.4658932E-03 | -1.1560497E-05 | 3.5612017E-03  |
| Q28    | -1.2574991E-03 | -1.0374908E-03 | -6.4421834E-05 | 8.1433804E-04  |
| P100   | 6.9122216E-04  | 6.5349290E-04  | 4.2009879E-04  | 1.6726691E-04  |
| P101   | 2.8983673E-04  | 3.1407028E-04  | 4.2321473E-04  | 5.2299626E-04  |
| P102   | -8.1563240E-05 | 4.2113134E-09  | 4.2609787E-04  | 8.5215086E-04  |
| P103   | 6.1601676E-04  | 5.7919688E-04  | 3.5961728E-04  | 1.2545224E-04  |
| P104   | 2.6617828E-04  | 2.8408327E-04  | 3.6425562E-04  | 4.3725622E-04  |
| P105   | -7.0779167E-05 | 2.7396567E-10  | 3.6973951E-04  | 7.3944353E-04  |
| P106   | 5.4082494E-04  | 5.0491343E-04  | 2.9914294E-04  | 8.3639191E-05  |
| P107   | 2.3745522E-04  | 2.4988180E-04  | 3.0580120E-04  | 3.5688860E-04  |
| P108   | -5.9989021E-05 | 2.5179760E-10  | 3.1337356E-04  | 6.2671701E-04  |
| P109   | 4.6559454E-04  | 4.3059379E-04  | 2.3864643E-04  | 4.1818867E-05  |
| P110   | 2.0797680E-04  | 2.1507598E-04  | 2.4761074E-04  | 2.1769566E-04  |
| P111   | -4.9195012E-05 | 2.0762963E-10  | 2.5698730E-04  | 5.1394992E-04  |
| P112   | 4.3339779E-04  | 3.9035345E-04  | 1.7376474E-04  | -3.8402729E-05 |
| P113   | 3.9035345E-04  | 3.5626462E-04  | 1.7814606E-04  | 1.3627778E-10  |
| P114   | 1.7376474E-04  | 1.7814606E-04  | 2.0040279E-04  | 2.0060990E-04  |
| P115   | -3.8402729E-05 | 1.3627778E-10  | 2.0060990E-04  | 4.0120054E-04  |
| P116   | 2.4657258E-04  | 2.2503986E-04  | 1.1252862E-04  | 9.8740960E-11  |
| P117   | -2.5611382E-05 | 8.4022964E-11  | 1.3378984E-04  | 2.6756685E-04  |
| P118   | 1.0930591E-04  | 9.9760429E-05  | 4.9884055E-05  | 2.2822442E-11  |
| P119   | 1.2300194E-04  | 1.1226041E-04  | 5.6134524E-05  | 2.3168764E-11  |
| P120   | 5.7127063E-05  | 5.8555824E-05  | 6.6012104E-05  | 7.3460388E-05  |
| P121   | 1.7622338E-06  | 1.4458773E-06  | -2.0689327E-07 | -1.8596863E-06 |
| P122   | -1.4241108E-05 | 5.0333546E-11  | 7.4393754E-05  | 1.4878037E-04  |
| P123   | 4.4469472E-05  | 4.0586036E-05  | 2.0294583E-05  | 1.5176923E-11  |
| P124   | -5.1590191E-06 | 1.7507412E-11  | 3.0084204E-05  | 6.0165523E-05  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |

| TRIPLE | P116           | P117           | P118           | P119           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | 1.6032103E-03  | -1.8187101E-03 | 6.4006181E-04  | 7.4424542E-04  |
| Q20    | -4.4223285E-04 | 4.7058672E-04  | -1.5143868E-04 | -1.8555719E-04 |
| Q21    | -2.5286965E-04 | 2.8279749E-04  | -9.7909386E-05 | -1.1499437E-04 |
| Q22    | -2.2275579E-03 | 2.4818720E-03  | -8.6141059E-04 | -1.0121465E-03 |
| Q23    | -7.1014253E-05 | 9.3187345E-05  | -2.6833335E-05 | -3.1773366E-05 |
| Q24    | -2.0640281E-03 | 2.3010253E-03  | -7.9801559E-04 | -9.3771924E-04 |
| Q26    | -1.9640318E-03 | 2.1728142E-03  | -7.5897592E-04 | -8.9199231E-04 |
| Q28    | -6.2994397E-04 | 5.4309466E-04  | -1.2688575E-04 | -2.6619055E-04 |
| P100   | 3.7679552E-04  | 1.1155285E-04  | 1.4918818E-04  | 1.7394018E-04  |
| P101   | 1.8108886E-04  | 3.3199365E-04  | 7.1700189E-05  | 8.3596058E-05  |
| P102   | 2.4525392E-09  | 5.3596641E-04  | 9.3220981E-10  | 1.0823619E-09  |
| P103   | 3.3886307E-04  | 8.3666023E-05  | 1.3683385E-04  | 1.5852326E-04  |
| P104   | 1.6620486E-04  | 2.7928585E-04  | 6.7113968E-05  | 7.7752143E-05  |
| P105   | 1.7994086E-10  | 4.6888603E-04  | 3.6943730E-11  | 3.9260760E-11  |
| P106   | 3.0093832E-04  | 5.5780259E-05  | 1.2448281E-04  | 1.4311009E-04  |
| P107   | 1.4893447E-04  | 2.2987238E-04  | 6.1606572E-05  | 7.0825211E-05  |
| P108   | 1.6653742E-10  | 4.0179329E-04  | 3.7132328E-11  | 3.9828086E-11  |
| P109   | 2.6299227E-04  | 2.7889640E-05  | 1.1212312E-04  | 1.2768690E-04  |
| P110   | 1.3136122E-04  | 1.8115894E-04  | 5.6004027E-05  | 6.3777931E-05  |
| P111   | 1.4021851E-10  | 3.3467471E-04  | 3.2091741E-11  | 3.4320696E-11  |
| P112   | 2.4657258E-04  | -2.5611382E-05 | 1.0930591E-04  | 1.2300194E-04  |
| P113   | 2.2503986E-04  | 8.4022964E-11  | 9.9760429E-05  | 1.1226041E-04  |
| P114   | 1.1252862E-04  | 1.3378984E-04  | 4.9884055E-05  | 5.6134524E-05  |
| P115   | 9.8740960E-11  | 2.6756685E-04  | 2.2822442E-11  | 2.3168764E-11  |
| P116   | 1.5460529E-04  | 6.5569427E-11  | 7.3655914E-05  | 8.1146990E-05  |
| P117   | 6.5569427E-11  | 1.9059957E-04  | 1.3503744E-11  | 1.3724615E-11  |
| P118   | 7.3655914E-05  | 1.3503744E-11  | 5.2427790E-05  | 4.7550035E-05  |
| P119   | 8.1146990E-05  | 1.3724615E-11  | 4.7550035E-05  | 5.0031946E-05  |
| P120   | 4.2113837E-05  | 5.4190418E-05  | 2.3399485E-05  | 2.5670978E-05  |
| P121   | 1.0398855E-06  | -1.3718589E-06 | 5.7778393E-07  | 6.3387209E-07  |
| P122   | 4.1833720E-11  | 1.0975263E-04  | 1.0115087E-11  | 1.0335958E-11  |
| P123   | 3.0231777E-05  | 1.0622990E-11  | 1.8772620E-05  | 1.9876975E-05  |
| P124   | 1.5361846E-11  | 4.5330980E-05  | 2.9670528E-12  | 2.9670260E-12  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |

| TRIPLE | P120           | P121           | P122           | P123           |
|--------|----------------|----------------|----------------|----------------|
| Q19    | -8.2407582E-05 | 2.1646396E-05  | -9.5908884E-04 | 2.5672922E-04  |
| Q20    | 1.4271142E-05  | -5.2942459E-06 | 2.2868840E-04  | -5.9293147E-05 |
| Q21    | 1.1928252E-05  | -3.3310541E-06 | 1.4683625E-04  | -3.9095815E-05 |
| Q22    | 1.0234795E-04  | -2.9254571E-05 | 1.2871607E-03  | -3.4390200E-04 |
| Q23    | 7.0455593E-06  | -1.0168221E-06 | 4.8227078E-05  | -1.0675282E-05 |
| Q24    | 9.5201563E-05  | -2.7113334E-05 | 1.1932940E-03  | -3.1858339E-04 |
| Q26    | 8.6068881E-05  | -2.5678370E-05 | 1.1260450E-03  | -3.0297546E-04 |
| Q28    | -4.8650879E-06 | -7.5766243E-06 | 3.0198742E-04  | -9.9442438E-05 |
| P100   | 1.2209775E-04  | 1.4833015E-06  | 6.2028883E-05  | 5.9767797E-05  |
| P101   | 1.3173989E-04  | -1.1366557E-06 | 1.7777954E-04  | 2.8724549E-05  |
| P102   | 1.4066171E-04  | -3.5608891E-06 | 2.8488305E-04  | 3.8427751E-10  |
| P103   | 1.0621423E-04  | 1.4739752E-06  | 4.6522438E-05  | 5.4973407E-05  |
| P104   | 1.1503438E-04  | -8.7036995E-07 | 1.5028879E-04  | 2.6963241E-05  |
| P105   | 1.2386619E-04  | -3.1357307E-06 | 2.5086796E-04  | 2.4382945E-11  |
| P106   | 9.0332963E-05  | 1.4646898E-06  | 3.1016578E-05  | 5.0180347E-05  |
| P107   | 9.8604841E-05  | -6.3960498E-07 | 1.2451262E-04  | 2.4834268E-05  |
| P108   | 1.0706792E-04  | -2.7104751E-06 | 2.1684617E-04  | 2.3280595E-11  |
| P109   | 7.4445108E-05  | 1.4553085E-06  | 1.5508019E-05  | 4.5383805E-05  |
| P110   | 8.2286360E-05  | -4.1487206E-07 | 9.9091804E-05  | 2.7668619E-05  |
| P111   | 9.0262790E-05  | -2.2850461E-06 | 1.8281050E-04  | 2.0068273E-11  |
| P112   | 5.7127063E-05  | 1.7622338E-06  | -1.4241188E-05 | 4.4469472E-05  |
| P113   | 5.8555824E-05  | 1.4458773E-06  | 5.0333546E-11  | 4.0586036E-05  |
| P114   | 6.6012104E-05  | -2.0689327E-07 | 7.4393754E-05  | 2.0294583E-05  |
| P115   | 7.3460388E-05  | -1.8596863E-06 | 1.4878037E-04  | 1.5176923E-11  |
| P116   | 4.2113837E-05  | 1.0398855E-06  | 4.1833720E-11  | 3.0231777E-05  |
| P117   | 5.4190418E-05  | -1.3718589E-06 | 1.0975263E-04  | 1.0622990E-11  |
| P118   | 2.3399485E-05  | 5.7778393E-07  | 1.0115087E-11  | 1.8772620E-05  |
| P119   | 2.5670978E-05  | 6.3387209E-07  | 1.0335958E-11  | 1.9876975E-05  |
| P120   | 3.0550705E-05  | -1.0784551E-07 | 3.4919454E-05  | 1.0215032E-05  |
| P121   | -1.0784551E-07 | 1.9164397E-08  | -8.8400693E-07 | 2.5223081E-07  |
| P122   | 3.4919454E-05  | -8.8400693E-07 | 7.0722875E-05  | 7.8924041E-12  |
| P123   | 1.0215032E-05  | 2.5223081E-07  | 7.8924041E-12  | 1.0853582E-05  |
| P124   | 1.5057248E-05  | -3.8118372E-07 | 3.0495666E-05  | 3.2393942E-12  |
| P125   | 0.             | 0.             | 0.             | 0.             |
| P126   | 0.             | 0.             | 0.             | 0.             |

| TRIPLE | P124           | P125 | P126 |
|--------|----------------|------|------|
| Q19    | -3.7472068E-04 | 0.   | 0.   |
| Q20    | 8.4186473E-05  | 0.   | 0.   |
| Q21    | 5.6760933E-05  | 0.   | 0.   |
| Q22    | 4.9716136E-04  | 0.   | 0.   |
| Q23    | 1.8599985E-05  | 0.   | 0.   |
| Q24    | 4.6088545E-04  | 0.   | 0.   |
| Q26    | 4.3470709E-04  | 0.   | 0.   |
| Q28    | 1.2212117E-04  | 0.   | 0.   |
| P100   | 2.5083949E-05  | 0.   | 0.   |
| P101   | 7.0176302E-05  | 0.   | 0.   |
| P102   | 1.1190003E-04  | 0.   | 0.   |
| P103   | 1.8813276E-05  | 0.   | 0.   |
| P104   | 5.9516262E-05  | 0.   | 0.   |
| P105   | 9.8970613E-05  | 0.   | 0.   |
| P106   | 1.2542838E-05  | 0.   | 0.   |
| P107   | 4.9520102E-05  | 0.   | 0.   |
| P108   | 8.6038533E-05  | 0.   | 0.   |
| P109   | 6.2713082E-06  | 0.   | 0.   |
| P110   | 3.9659127E-05  | 0.   | 0.   |
| P111   | 7.3100964E-05  | 0.   | 0.   |
| P112   | -5.7590191E-06 | 0.   | 0.   |
| P113   | 1.7507412E-11  | 0.   | 0.   |
| P114   | 3.0084204E-05  | 0.   | 0.   |
| P115   | 6.0165523E-05  | 0.   | 0.   |
| P116   | 1.5361846E-11  | 0.   | 0.   |
| P117   | 4.5330980E-05  | 0.   | 0.   |
| P118   | 2.9670528E-12  | 0.   | 0.   |
| P119   | 2.9670260E-12  | 0.   | 0.   |
| P120   | 1.5057248E-05  | 0.   | 0.   |
| P121   | -3.8118372E-07 | 0.   | 0.   |
| P122   | 3.0495666E-05  | 0.   | 0.   |
| P123   | 3.2393942E-12  | 0.   | 0.   |
| P124   | 1.6555536E-05  | 0.   | 0.   |
| P125   | 0.             | 0.   | 0.   |
| P126   | 0.             | 0.   | 0.   |

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| (GRN) | Q19            | Q20            | Q21            | Q22            |
|-------|----------------|----------------|----------------|----------------|
| P100  | 7.1586028E-02  | 3.0197123E-02  | 6.1106135E-02  | 3.7704779E-02  |
| P101  | 4.9741702E-02  | 1.4330570E-02  | 1.9714933E-02  | -6.0865005E-03 |
| P102  | 2.9529249E-02  | -3.5067880E-04 | -1.8584149E-02 | -4.6606349E-02 |
| P103  | 1.1122331E-02  | 4.5251695E-03  | 4.0186339E-02  | 1.7120848E-02  |
| P104  | 2.4608749E-02  | 1.7322025E-02  | 1.4186811E-02  | -6.1051752E-03 |
| P105  | 3.5989261E-02  | 3.1843517E-02  | -7.6807435E-03 | -3.2095774E-02 |
| P106  | -4.1534986E-03 | -5.4494789E-03 | 8.7849591E-03  | 6.7098899E-03  |
| P107  | 1.4810467E-02  | 1.5236670E-02  | 3.8527058E-03  | -2.6841868E-03 |
| P108  | 3.3763570E-02  | 3.5345485E-02  | -7.7069451E-03 | -9.8830009E-03 |
| P109  | -1.0781474E-02 | -1.2277850E-02 | 1.6187082E-03  | 3.9932708E-03  |
| P110  | 9.7714670E-03  | 1.0388765E-02  | -2.2225580E-04 | -2.2418351E-04 |
| P111  | 3.0624882E-02  | 3.2955900E-02  | -1.7532004E-03 | -4.5036252E-03 |
| P112  | -1.9555661E-02 | -2.2035971E-02 | 1.6192628E-03  | 3.2226188E-03  |
| P113  | -1.5420966E-02 | -1.7392891E-02 | 1.0991612E-03  | 2.9872250E-03  |
| P114  | 5.5606883E-03  | 5.9468088E-03  | -6.4587904E-04 | 9.9517862E-04  |
| P115  | 2.6973193E-02  | 2.9187233E-02  | -1.1368535E-03 | -3.5178688E-03 |
| P116  | -1.2250407E-02 | -1.3804651E-02 | 4.6052659E-04  | 1.6646323E-03  |
| P117  | 1.9841360E-02  | 2.1583988E-02  | -5.1352745E-04 | -2.1252225E-03 |
| P118  | -9.0193036E-03 | -1.0151031E-02 | 3.2715577E-04  | 7.7424823E-04  |
| P119  | -7.7288252E-03 | -8.7034923E-03 | 2.0387468E-04  | 7.8379348E-04  |
| P120  | 2.0842898E-03  | 2.1443303E-03  | -5.7045906E-06 | -1.4105719E-04 |
| P121  | -2.3953080E-04 | -2.6464264E-04 | 4.4555159E-06  | 2.3479649E-05  |
| P122  | 1.1785364E-02  | 1.2862434E-02  | -1.8615377E-04 | -1.0919865E-03 |
| P123  | -2.9209381E-03 | -3.2888446E-03 | 4.4219017E-05  | 2.5844758E-04  |
| P124  | 4.9551425E-03  | 5.4178800E-03  | -5.0286096E-05 | -4.1902454E-04 |
| P125  | -0.            | -0.            | 0.             | 0.             |
| P126  | -0.            | -0.            | 0.             | 0.             |



| (GRN) | Q23            | Q24            | Q26            | Q28            |
|-------|----------------|----------------|----------------|----------------|
| P100  | 2.0203604E-02  | 3.1247945E-02  | 4.0142565E-02  | 1.0667017E-02  |
| P101  | -1.9070755E-03 | 5.6010520E-03  | 2.2214968E-02  | -8.3167503E-03 |
| P102  | -2.2365975E-02 | -1.8129899E-02 | 5.6266443E-03  | -2.5882331E-02 |
| P103  | 2.0776991E-02  | 1.9296988E-02  | 2.8398662E-02  | 1.4605947E-02  |
| P104  | 3.4719001E-03  | -5.0031983E-04 | 1.2391371E-02  | -3.3442536E-03 |
| P105  | -1.4055788E-02 | -1.8599024E-02 | -2.3509541E-03 | -2.0659204E-02 |
| P106  | 2.2476561E-02  | 1.6133662E-02  | 2.4414416E-02  | 2.7361107E-02  |
| P107  | 4.3678719E-03  | -9.6359595E-04 | 4.8336898E-03  | 3.0474085E-03  |
| P108  | -1.1308115E-02 | -2.0257878E-02 | -1.3692166E-02 | -2.0895076E-02 |
| P109  | 4.6219423E-03  | 8.6631000E-03  | 1.9855580E-02  | 4.0310196E-02  |
| P110  | 1.9557716E-03  | -2.4393985E-03 | 3.0068771E-03  | 9.0466635E-03  |
| P111  | -5.9688571E-03 | -7.8256108E-03 | -1.9406704E-02 | -2.1759782E-02 |
| P112  | 3.1081092E-03  | 5.2737952E-03  | 1.2976058E-02  | 6.1604908E-02  |
| P113  | 1.9942068E-03  | 5.2072275E-03  | 1.0985044E-02  | 4.9567984E-02  |
| P114  | -2.1870587E-03 | 2.4592243E-03  | -2.4110185E-03 | 8.3950859E-03  |
| P115  | -3.1237228E-03 | -5.2466840E-03 | -1.0468641E-02 | -2.1813443E-02 |
| P116  | 1.9760799E-04  | 2.4000555E-03  | 5.0331396E-03  | 3.1300761E-02  |
| P117  | -1.0227005E-03 | -2.6865868E-03 | -5.1307432E-03 | -1.6982874E-02 |
| P118  | 2.4890709E-05  | 6.8632830E-04  | 2.2547283E-03  | -1.0844424E-03 |
| P119  | -1.8857185E-04 | 8.6810055E-04  | 2.0326613E-03  | 1.1527771E-02  |
| P120  | -1.9295200E-04 | -1.1007828E-04 | -3.8957499E-05 | 2.4242750E-03  |
| P121  | -1.3615547E-06 | 2.6017569E-05  | 5.0914374E-05  | 3.1745706E-04  |
| P122  | -1.3781705E-04 | -1.1637941E-03 | -2.1009912E-03 | -1.0432602E-02 |
| P123  | -1.7810814E-04 | 2.3438541E-04  | 5.3235602E-04  | 4.7452406E-03  |
| P124  | 5.2607618E-05  | -3.8762815E-04 | -6.6054268E-04 | -4.4676145E-03 |
| P125  | 0.             | 0.             | 0.             | -0.            |
| P126  | 0.             | 0.             | 0.             | -0.            |

# INFLUENCE FLEXIBILITY COEFFICIENT MATRIX

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| (AMN) | P100           | P101           | P102           | P103           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 1.2776876E-03  | 1.2312198E-03  | 1.1882233E-03  | 9.9785687E-04  |
| P101  | 1.2312197E-03  | 1.2487624E-03  | 1.2649944E-03  | 9.8836700E-04  |
| P102  | 1.1882232E-03  | 1.2649944E-03  | 1.3360304E-03  | 9.7958606E-04  |
| P103  | 9.9785695E-04  | 9.8836700E-04  | 9.7958606E-04  | 8.3143073E-04  |
| P104  | 9.9008917E-04  | 1.0090721E-03  | 1.0266369E-03  | 8.2540725E-04  |
| P105  | 9.8527807E-04  | 1.0315230E-03  | 1.0743133E-03  | 8.2134608E-04  |
| P106  | 7.6647992E-04  | 7.5884650E-04  | 7.5178337E-04  | 6.5070955E-04  |
| P107  | 7.7462978E-04  | 7.8992746E-04  | 8.0408225E-04  | 6.5512835E-04  |
| P108  | 7.8577905E-04  | 8.2360529E-04  | 8.5860575E-04  | 6.6194273E-04  |
| P109  | 5.6242788E-04  | 5.4941859E-04  | 5.3738115E-04  | 4.8343796E-04  |
| P110  | 5.8072184E-04  | 5.9111143E-04  | 6.0072485E-04  | 4.9624976E-04  |
| P111  | 6.0261941E-04  | 6.3651796E-04  | 6.6788411E-04  | 5.1171064E-04  |
| P112  | 3.7374146E-04  | 3.5116490E-04  | 3.3027493E-04  | 3.2684514E-04  |
| P113  | 3.8397091E-04  | 3.6607544E-04  | 3.4951690E-04  | 3.3445973E-04  |
| P114  | 4.1808422E-04  | 4.2377867E-04  | 4.2904769E-04  | 3.5956582E-04  |
| P115  | 4.3722669E-04  | 4.6715548E-04  | 4.7484843E-04  | 3.7381433E-04  |
| P116  | 2.2727507E-04  | 2.1325342E-04  | 2.0027925E-04  | 2.0011197E-04  |
| P117  | 2.7322864E-04  | 2.7520378E-04  | 3.1553724E-04  | 2.2539999E-04  |
| P118  | 9.4673281E-05  | 8.4456544E-05  | 7.5003052E-05  | 8.5220850E-05  |
| P119  | 1.0783480E-04  | 9.9056911E-05  | 9.0934784E-05  | 9.6036663E-05  |
| P120  | 1.2773769E-04  | 1.2992980E-04  | 1.3195816E-04  | 1.1195055E-04  |
| P121  | -4.1296999E-07 | -6.8076567E-07 | -9.2855557E-07 | -3.2817683E-07 |
| P122  | 1.4446775E-04  | 1.5750586E-04  | 1.6956977E-04  | 1.2524606E-04  |
| P123  | 3.7606077E-05  | 3.4299784E-05  | 3.1240490E-05  | 3.3675464E-05  |
| P124  | 5.6545609E-05  | 6.2023889E-05  | 6.7092904E-05  | 4.7228252E-05  |
| P125  | 0.             | -0.            | -0.            | 0.             |
| P126  | 0.             | -0.            | -0.            | 0.             |

| (AMN) | P104           | P105           | P106           | P107           |
|-------|----------------|----------------|----------------|----------------|
| P100  | 9.9034918E-04  | 9.8527808E-04  | 7.6647990E-04  | 7.7462980E-04  |
| P101  | 1.0090721E-03  | 1.0315230E-03  | 7.5884650E-04  | 7.8992746E-04  |
| P102  | 1.0266369E-03  | 1.0743133E-03  | 7.5178337E-04  | 8.0408225E-04  |
| P103  | 8.2540725E-04  | 8.2134608E-04  | 6.5070955E-04  | 6.5512835E-04  |
| P104  | 8.5253470E-04  | 8.6186615E-04  | 6.4279591E-04  | 6.6873631E-04  |
| P105  | 8.6186615E-04  | 9.0259088E-04  | 6.3691459E-04  | 6.8350928E-04  |
| P106  | 6.4279591E-04  | 6.3691459E-04  | 5.3713270E-04  | 5.2757780E-04  |
| P107  | 6.6873631E-04  | 6.8350928E-04  | 5.2757780E-04  | 5.5704093E-04  |
| P108  | 6.9664103E-04  | 7.3178180E-04  | 5.1989389E-04  | 5.6712775E-04  |
| P109  | 4.7043640E-04  | 4.5929315E-04  | 4.1022097E-04  | 3.9302595E-04  |
| P110  | 5.0534548E-04  | 5.1550735E-04  | 4.0660723E-04  | 4.1937115E-04  |
| P111  | 5.4299708E-04  | 5.7455614E-04  | 4.0449022E-04  | 4.4724173E-04  |
| P112  | 3.0504349E-04  | 2.8494199E-04  | 2.9030929E-04  | 2.6103837E-04  |
| P113  | 3.1706630E-04  | 3.0125154E-04  | 2.9313875E-04  | 2.6984254E-04  |
| P114  | 3.6444618E-04  | 3.7020630E-04  | 2.9816065E-04  | 3.0510516E-04  |
| P115  | 4.0153540E-04  | 4.2927934E-04  | 2.9605290E-04  | 3.3385707E-04  |
| P116  | 1.8656547E-04  | 1.7407226E-04  | 1.7943807E-04  | 1.6121103E-04  |
| P117  | 2.5582110E-04  | 2.7615271E-04  | 1.8703342E-04  | 2.1488186E-04  |
| P118  | 7.5437590E-05  | 6.6237856E-05  | 8.0529759E-05  | 6.7310166E-05  |
| P119  | 8.7596837E-05  | 7.9728534E-05  | 8.8324707E-05  | 7.6936300E-05  |
| P120  | 1.1385762E-04  | 1.1600677E-04  | 9.5051522E-05  | 9.7713269E-05  |
| P121  | -5.8085610E-07 | -8.2527795E-07 | -1.1644487E-07 | -4.5951279E-07 |
| P122  | 1.3738669E-04  | 1.4943500E-04  | 9.9771202E-05  | 1.1632728E-04  |
| P123  | 3.0499494E-05  | 2.7531576E-05  | 3.1288456E-05  | 2.6998415E-05  |
| P124  | 5.4335334E-05  | 5.9394382E-05  | 3.9283332E-05  | 4.6247774E-05  |
| P125  | -0.            | -0.            | 0.             | 0.             |
| P126  | -0.            | -0.            | 0.             | 0.             |

| (AMN) | P108           | P109          | P110           | P111           |
|-------|----------------|---------------|----------------|----------------|
| P100  | 7.8577905E-04  | 5.6242788E-04 | 5.8072184E-04  | 6.0261943E-04  |
| P101  | 8.2360529E-04  | 5.4941859E-04 | 5.9111143E-04  | 6.3651796E-04  |
| P102  | 8.5860575E-04  | 5.3738115E-04 | 6.0072485E-04  | 6.6788411E-04  |
| P103  | 6.6194273E-04  | 4.8343796E-04 | 4.9624976E-04  | 5.1171064E-04  |
| P104  | 6.9664103E-04  | 4.7043640E-04 | 5.0534548E-04  | 5.4299708E-04  |
| P105  | 7.3178180E-04  | 4.5929315E-04 | 5.1550735E-04  | 5.7455614E-04  |
| P106  | 5.1989389E-04  | 4.1022097E-04 | 4.0660723E-04  | 4.0449022E-04  |
| P107  | 5.6712775E-04  | 3.9302595E-04 | 4.1937115E-04  | 4.4724173E-04  |
| P108  | 6.1531816E-04  | 3.7751730E-04 | 4.3323153E-04  | 4.9074737E-04  |
| P109  | 3.7751730E-04  | 3.3630470E-04 | 3.1610617E-04  | 2.9608911E-04  |
| P110  | 4.3323153E-04  | 3.1610617E-04 | 3.4148436E-04  | 3.5139098E-04  |
| P111  | 4.9074737E-04  | 2.9608911E-04 | 3.5139098E-04  | 4.0739743E-04  |
| P112  | 2.3317623E-04  | 2.5390976E-04 | 2.1738956E-04  | 1.8113746E-04  |
| P113  | 2.4790157E-04  | 2.5196131E-04 | 2.2313363E-04  | 1.9443658E-04  |
| P114  | 3.1303771E-04  | 2.3643568E-04 | 2.4648616E-04  | 2.5640593E-04  |
| P115  | 3.7211559E-04  | 2.1700642E-04 | 2.6592862E-04  | 3.1545111E-04  |
| P116  | 1.4386923E-04  | 1.5923328E-04 | 1.3627987E-04  | 1.1339848E-04  |
| P117  | 2.4296020E-04  | 1.3748809E-04 | 1.7367275E-04  | 2.1026438E-04  |
| P118  | 5.4549342E-05  | 7.6261361E-05 | 5.9364141E-05  | 4.2557528E-05  |
| P119  | 6.6015019E-05  | 8.1001595E-05 | 6.6510136E-05  | 5.2067950E-05  |
| P120  | 1.0066111E-04  | 7.7956506E-05 | 8.1600114E-05  | 8.5376024E-05  |
| P121  | -7.9793972E-07 | 1.0985932E-07 | -3.3266028E-07 | -7.7756698E-07 |
| P122  | 1.3298151E-04  | 7.3510181E-05 | 9.5075952E-05  | 1.1687071E-04  |
| P123  | 2.2877776E-05  | 2.9073762E-05 | 2.3592685E-05  | 1.8126041E-05  |
| P124  | 5.3244437E-05  | 2.8987626E-05 | 3.8072073E-05  | 4.7249795E-05  |
| P125  | -0.            | 0.            | 0.             | -0.            |
| P126  | -0.            | 0.            | 0.             | -0.            |

| (AMN) | P112          | P113          | P114           | P115           |
|-------|---------------|---------------|----------------|----------------|
| P100  | 3.7374143E-04 | 3.8397086E-04 | 4.1808422E-04  | 4.3722670E-04  |
| P101  | 3.5116490E-04 | 3.6607544E-04 | 4.2377867E-04  | 4.6715548E-04  |
| P102  | 3.3027493E-04 | 3.4951690E-04 | 4.2904769E-04  | 4.9484843E-04  |
| P103  | 3.2684514E-04 | 3.3445973E-04 | 3.5956582E-04  | 3.7381433E-04  |
| P104  | 3.0504349E-04 | 3.1706630E-04 | 3.6444618E-04  | 4.0153540E-04  |
| P105  | 2.8494199E-04 | 3.0125154E-04 | 3.7020630E-04  | 4.2927934E-04  |
| P106  | 2.9030929E-04 | 2.9313875E-04 | 2.9816065E-04  | 2.9605290E-04  |
| P107  | 2.6103837E-04 | 2.6984254E-04 | 3.0510516E-04  | 3.3385707E-04  |
| P108  | 2.3317623E-04 | 2.4790157E-04 | 3.1303771E-04  | 3.7211559E-04  |
| P109  | 2.5390976E-04 | 2.5196131E-04 | 2.3643568E-04  | 2.1700642E-04  |
| P110  | 2.1738956E-04 | 2.2313363E-04 | 2.4648616E-04  | 2.6592862E-04  |
| P111  | 1.8113746E-04 | 1.9443658E-04 | 2.5640593E-04  | 3.1545111E-04  |
| P112  | 2.2196773E-04 | 2.1300526E-04 | 1.7108834E-04  | 1.3103607E-04  |
| P113  | 2.1300526E-04 | 2.0736092E-04 | 1.7585176E-04  | 1.4269718E-04  |
| P114  | 1.7108834E-04 | 1.7585176E-04 | 1.9911921E-04  | 2.0022323E-04  |
| P115  | 1.3103607E-04 | 1.4269718E-04 | 2.0022323E-04  | 2.5647719E-04  |
| P116  | 1.4197874E-04 | 1.3738685E-04 | 1.1128649E-04  | 8.3813095E-05  |
| P117  | 8.2117542E-05 | 9.0542597E-05 | 1.3353787E-04  | 1.7623614E-04  |
| P118  | 7.5234367E-05 | 7.1007355E-05 | 5.0609517E-05  | 3.0970112E-05  |
| P119  | 7.6071412E-05 | 7.2921510E-05 | 5.5915920E-05  | 3.8513775E-05  |
| P120  | 6.0114355E-05 | 6.1111361E-05 | 6.5703236E-05  | 6.9964121E-05  |
| P121  | 4.0980612E-07 | 3.1225092E-07 | -2.1111965E-07 | -7.4411639E-07 |
| P122  | 4.3519469E-05 | 4.8467500E-05 | 7.4256039E-05  | 1.0010344E-04  |
| P123  | 2.7813081E-05 | 2.6650434E-05 | 2.0188108E-05  | 1.3494244E-05  |
| P124  | 1.7060307E-05 | 1.9127452E-05 | 3.0029116E-05  | 4.1010907E-05  |
| P125  |               | 0.            | 0.             | -0.            |
| P126  | 0.            | 0.            | 0.             | -0.            |

| (AMN) | P116          | P117           | P118          | P119          |
|-------|---------------|----------------|---------------|---------------|
| P100  | 2.2727508E-04 | 2.7322865E-04  | 9.4673275E-05 | 1.0783479E-04 |
| P101  | 2.1325342E-04 | 2.9520378E-04  | 8.4456544E-05 | 9.9056911E-05 |
| P102  | 2.0027925E-04 | 3.1553724E-04  | 7.5003052E-05 | 9.0934784E-05 |
| P103  | 2.0011197E-04 | 2.3539999E-04  | 8.5220850E-05 | 9.6036663E-05 |
| P104  | 1.8656547E-04 | 2.5582110E-04  | 7.5437590E-05 | 8.7596837E-05 |
| P105  | 1.7407226E-04 | 2.7615271E-04  | 6.6237856E-05 | 7.9728534E-05 |
| P106  | 1.7943807E-04 | 1.8703342E-04  | 8.0529759E-05 | 8.8324707E-05 |
| P107  | 1.6121103E-04 | 2.1488186E-04  | 6.7310166E-05 | 7.6936300E-05 |
| P108  | 1.4386923E-04 | 2.4296020E-04  | 5.4549342E-05 | 6.6015019E-05 |
| P109  | 1.5923328E-04 | 1.3748809E-04  | 7.6261361E-05 | 8.1001595E-05 |
| P110  | 1.3627987E-04 | 1.7367275E-04  | 5.9364141E-05 | 6.6510136E-05 |
| P111  | 1.1339848E-04 | 2.1026438E-04  | 4.2557528E-05 | 5.2067950E-05 |
| P112  | 1.4197874E-04 | 8.2117542E-05  | 7.5234367E-05 | 7.6071412E-05 |
| P113  | 1.3738685E-04 | 9.0542597E-05  | 7.1007355E-05 | 7.2921510E-05 |
| P114  | 1.1128649E-04 | 1.3353787E-04  | 5.0609517E-05 | 5.5915920E-05 |
| P115  | 8.3813095E-05 | 1.7623614E-04  | 3.0970112E-05 | 3.8513775E-05 |
| P116  | 1.0267488E-04 | 5.3521717E-05  | 5.6714197E-05 | 5.7775080E-05 |
| P117  | 5.3521717E-05 | 1.3260260E-04  | 1.9532404E-05 | 2.4620903E-05 |
| P118  | 5.6714197E-05 | 1.9532404E-05  | 4.5371107E-05 | 3.9532878E-05 |
| P119  | 5.7775080E-05 | 2.4620903E-05  | 3.9532878E-05 | 3.9388297E-05 |
| P120  | 4.3613016E-05 | 5.2017784E-05  | 2.4345874E-05 | 2.6466515E-05 |
| P121  | 3.6589006E-07 | -6.5844864E-06 | 3.4423523E-07 | 3.2615829E-07 |
| P122  | 2.8796059E-05 | 7.8686832E-05  | 1.0405150E-05 | 1.3257972E-05 |
| P123  | 2.1910516E-05 | 8.6751572E-06  | 1.5785726E-05 | 1.6094553E-05 |
| P124  | 1.1402316E-05 | 3.3065796E-05  | 4.0931336E-06 | 5.2526657E-06 |
| P125  | 0.            | -0.            | -0.           | 0.            |
| P126  | 0.            | -0.            | -0.           | 0.            |

| (AMN) | P120           | P121           | P122           | P123          |
|-------|----------------|----------------|----------------|---------------|
| P100  | 1.2773769E-04  | -4.1296984E-07 | 1.4446795E-04  | 3.7606074E-05 |
| P101  | 1.2992980E-04  | -6.8076567E-07 | 1.5750586E-04  | 3.4299784E-05 |
| P102  | 1.3195816E-04  | -9.2855557E-07 | 1.6956977E-04  | 3.1240490E-05 |
| P103  | 1.1195055E-04  | -3.2817683E-07 | 1.2524606E-04  | 3.3675464E-05 |
| P104  | 1.1385762E-04  | -5.8085610E-07 | 1.3738669E-04  | 3.0499494E-05 |
| P105  | 1.1600677E-04  | -8.2527795E-07 | 1.4943500E-04  | 2.7531576E-05 |
| P106  | 9.5051522E-05  | -1.1644487E-07 | 9.9771202E-05  | 3.1288456E-05 |
| P107  | 9.7713269E-05  | -4.5951279E-07 | 1.1632728E-04  | 2.6998415E-05 |
| P108  | 1.0066111E-04  | -7.9793972E-07 | 1.3298151E-04  | 2.2877776E-05 |
| P109  | 7.7956506E-05  | 1.0985932E-07  | 7.3510181E-05  | 2.9073762E-05 |
| P110  | 8.1600114E-05  | -3.3266028E-07 | 9.5075952E-05  | 2.3592685E-05 |
| P111  | 8.5376024E-05  | -7.7756698E-07 | 1.1687071E-04  | 1.8126041E-05 |
| P112  | 6.0114355E-05  | 4.0980612E-07  | 4.3519469E-05  | 2.7813081E-05 |
| P113  | 6.1111361E-05  | 3.1225092E-07  | 4.8467500E-05  | 2.6650434E-05 |
| P114  | 6.5703236E-05  | -2.1111965E-07 | 7.4256039E-05  | 2.0188108E-05 |
| P115  | 6.9964121E-05  | -7.4411639E-07 | 1.0010344E-04  | 1.3494244E-05 |
| P116  | 4.3613016E-05  | 3.6589006E-07  | 2.8796059E-05  | 2.1910516E-05 |
| P117  | 5.2017784E-05  | -6.5844864E-07 | 7.8686832E-05  | 8.6751572E-06 |
| P118  | 2.4345874E-05  | 3.4423523E-07  | 1.0405150E-05  | 1.5985726E-05 |
| P119  | 2.6466515E-05  | 3.2615829E-07  | 1.3257972E-05  | 1.6094553E-05 |
| P120  | 3.0368056E-05  | -8.4121857E-08 | 3.3775990E-05  | 1.0479575E-05 |
| P121  | -8.4121857E-08 | 1.0262083E-08  | -4.9973912E-07 | 1.4291011E-07 |
| P122  | 3.3775990E-05  | -4.9973912E-07 | 5.4016538E-05  | 4.6920439E-06 |
| P123  | 1.0479575E-05  | 1.4291011E-07  | 4.6920439E-06  | 9.5021495E-06 |
| P124  | 1.4611091E-05  | -2.2891296E-07 | 2.3882534E-05  | 1.8642883E-06 |
| P125  | 0.             | 0.             | -0.            | 0.            |
| P126  | 0.             | 0.             | -0.            | 0.            |

| (AMN) | P124           | P125 | P126 |
|-------|----------------|------|------|
| P100  | 5.6545613E-05  | 0.   | 0.   |
| P101  | 6.2023889E-05  | -0.  | -0.  |
| P102  | 6.7092904E-05  | -0.  | -0.  |
| P103  | 4.9228252E-05  | 0.   | 0.   |
| P104  | 5.4335334E-05  | -0.  | -0.  |
| P105  | 5.9394382E-05  | -0.  | -0.  |
| P106  | 3.9283332E-05  | 0.   | 0.   |
| P107  | 4.6247774E-05  | 0.   | 0.   |
| P108  | 5.3244437E-05  | -0.  | -0.  |
| P109  | 2.8987626E-05  | 0.   | 0.   |
| P110  | 3.8072073E-05  | 0.   | 0.   |
| P111  | 4.7249795E-05  | -0.  | -0.  |
| P112  | 1.7060307E-05  | 0.   | 0.   |
| P113  | 1.9127452E-05  | 0.   | 0.   |
| P114  | 3.0029116E-05  | 0.   | 0.   |
| P115  | 4.1010907E-05  | -0.  | -0.  |
| P116  | 1.1402316E-05  | 0.   | 0.   |
| P117  | 3.3065796E-05  | -0.  | -0.  |
| P118  | 4.0931336E-06  | -0.  | -0.  |
| P119  | 5.2526657E-06  | 0.   | 0.   |
| P120  | 1.4611091E-05  | 0.   | 0.   |
| P121  | -2.2891296E-07 | 0.   | 0.   |
| P122  | 2.3882534E-05  | -0.  | -0.  |
| P123  | 1.8642883E-06  | 0.   | 0.   |
| P124  | 1.3933270E-05  | -0.  | -0.  |
| P125  | -0.            | -0.  | -0.  |
| P126  | -0.            | -0.  | -0.  |



## IX. REFERENCES

1. L. B. Wehle, Jr. and Warner Lansing, "A Method for Reducing The Analysis of Complex Redundant Structures to a Routine Procedure", Journal of The Aeronautical Sciences, Oct. 1952.
2. J. S. Mason, Ryan Report No. 62B094, "Structural Design Criteria, VZ-11 Research Aircraft", 1 July 1962.